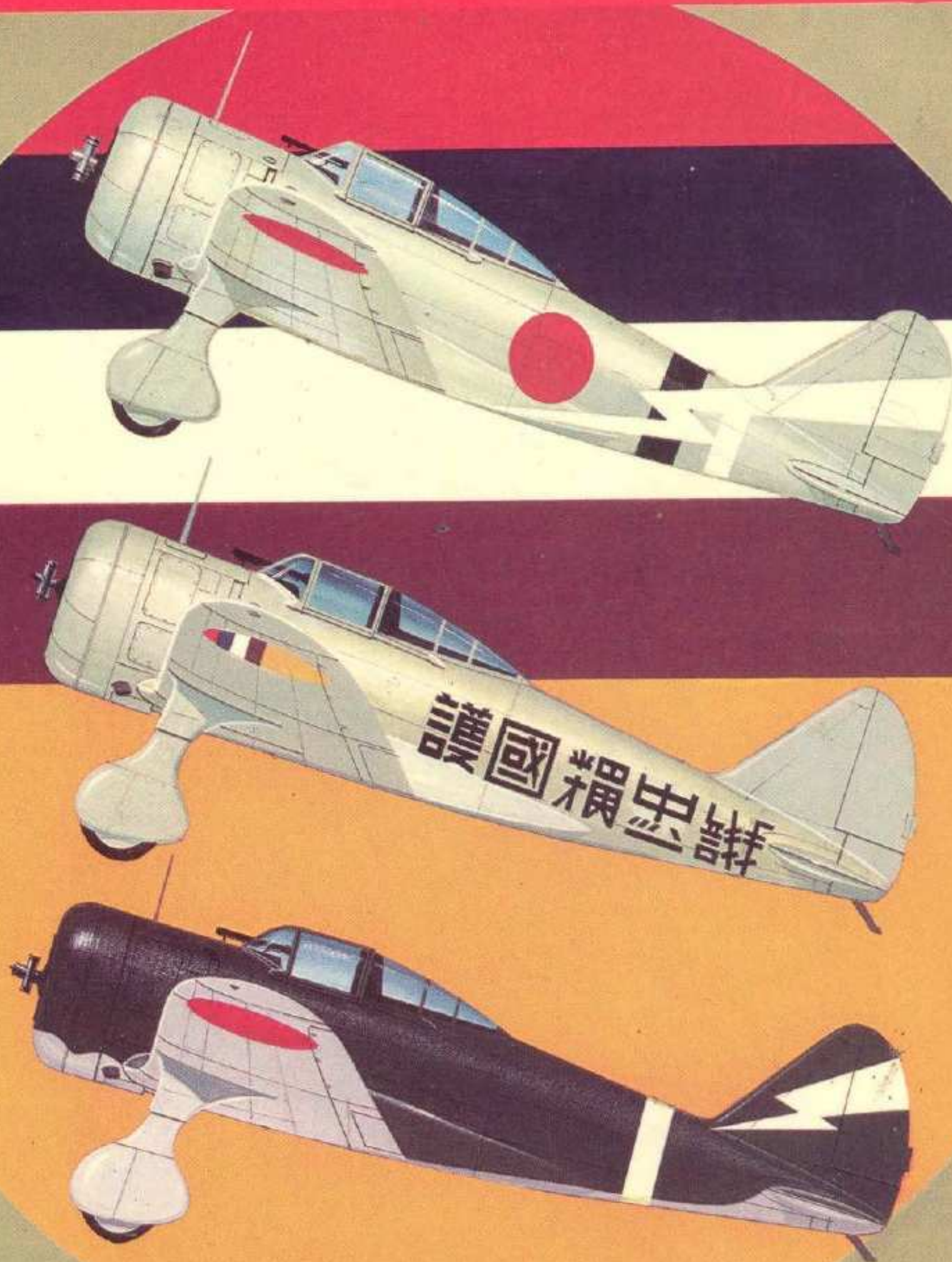


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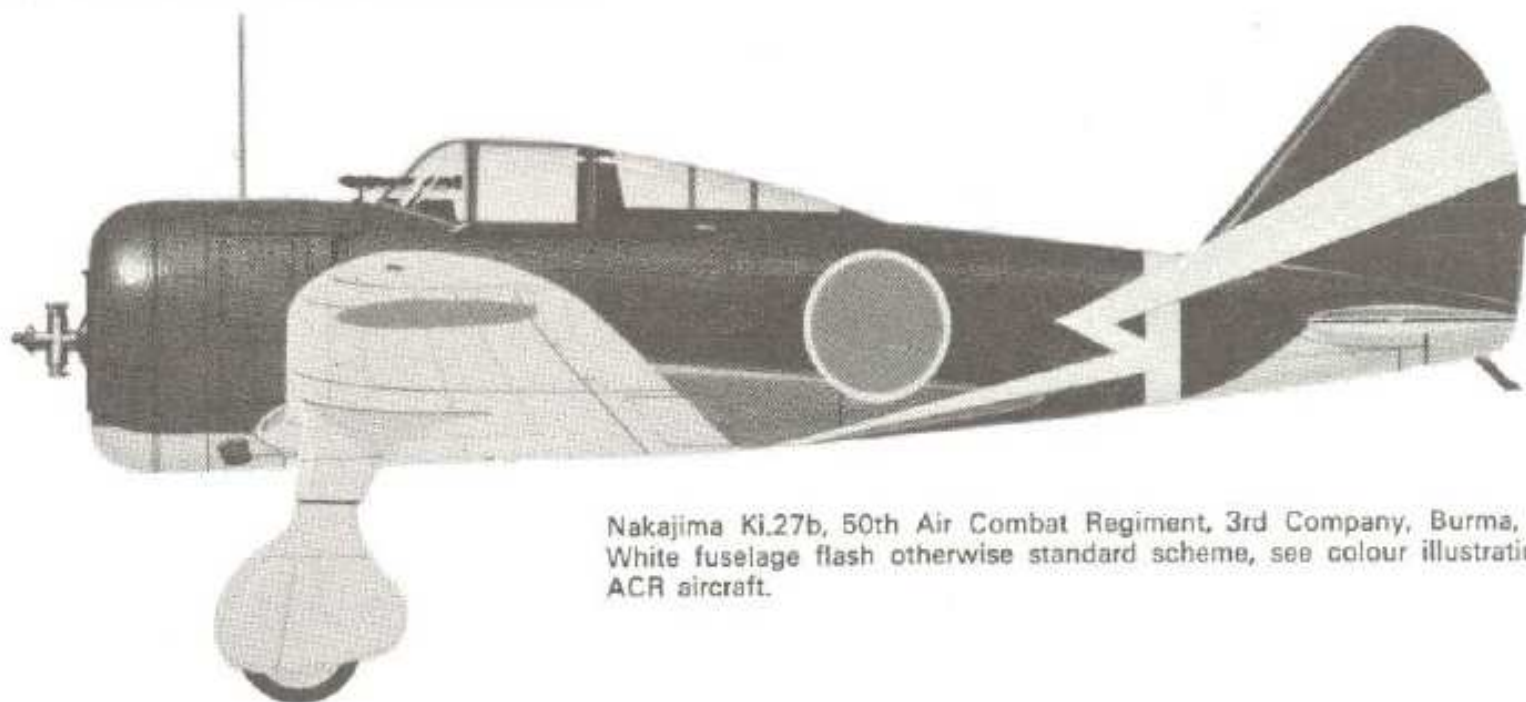
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NAKAJIMA Ki.27A-B MANSHU Ki.79A-B
IN JAPANESE ARMY AIR FORCE-MANCHOUKUO-IPSF
RACAF-PLAAF & CAF SERVICE





Line-ups of Mitsubishi Ki.30a Type 97 Light Bombers (left) and Nakajima Ki.27a Type 97 Fighters (background) ready for filming sequences of *Moyoru Ozora*, Japan's first true aviation movie, vividly showing the aerial combat in China in 1938 and 1939. (Noboru Jyoko via Bueschel).



Nakajima Ki.27b, 50th Air Combat Regiment, 3rd Company, Burma, late 1942. White fuselage flash otherwise standard scheme, see colour illustration of 50th ACR aircraft.

NAKAJIMA Ki.27A-B MANSU Ki.79A-B IN JAPANESE ARMY AIR FORCE-MANCHOUKUO-IPSF RACAF-PLAAF & CAF SERVICE

**Compiled and written by
Richard M. Bueschel**

**Illustrated by
Richard Ward**

ACKNOWLEDGEMENTS

The Ki.27, one of the first of the modern monoplane fighters in large scale production in the world owed nothing to foreign design and founded the long line of successful Nakajima fighters of the war years. AIRCAM No. 13 covers the Ki.43, No. 25 will cover the Ki.44 and the Ki.84 will be No. 30 in the Series. Thanks are due to all who assisted with material and information whose names are listed below in alphabetical order:

Shorzoe Abe, H. G. Anderson, H. Ando, Koku Asahi, Asahigraph, Asahi Press, Domei Press, Hiko Nippon, Hiko Shonen, H. Inayama, Koku Jidai, Noboru Jyoko, Koku Shonen, Gregory Kohn, S. Koyama, M. B. Passingham, F. D. Price, Warren Shipp, Sora, Sekai-no-Kokuki, Shashin Shuho, S. Tachibana, M. Toda, D. J. Voaden, USAF.

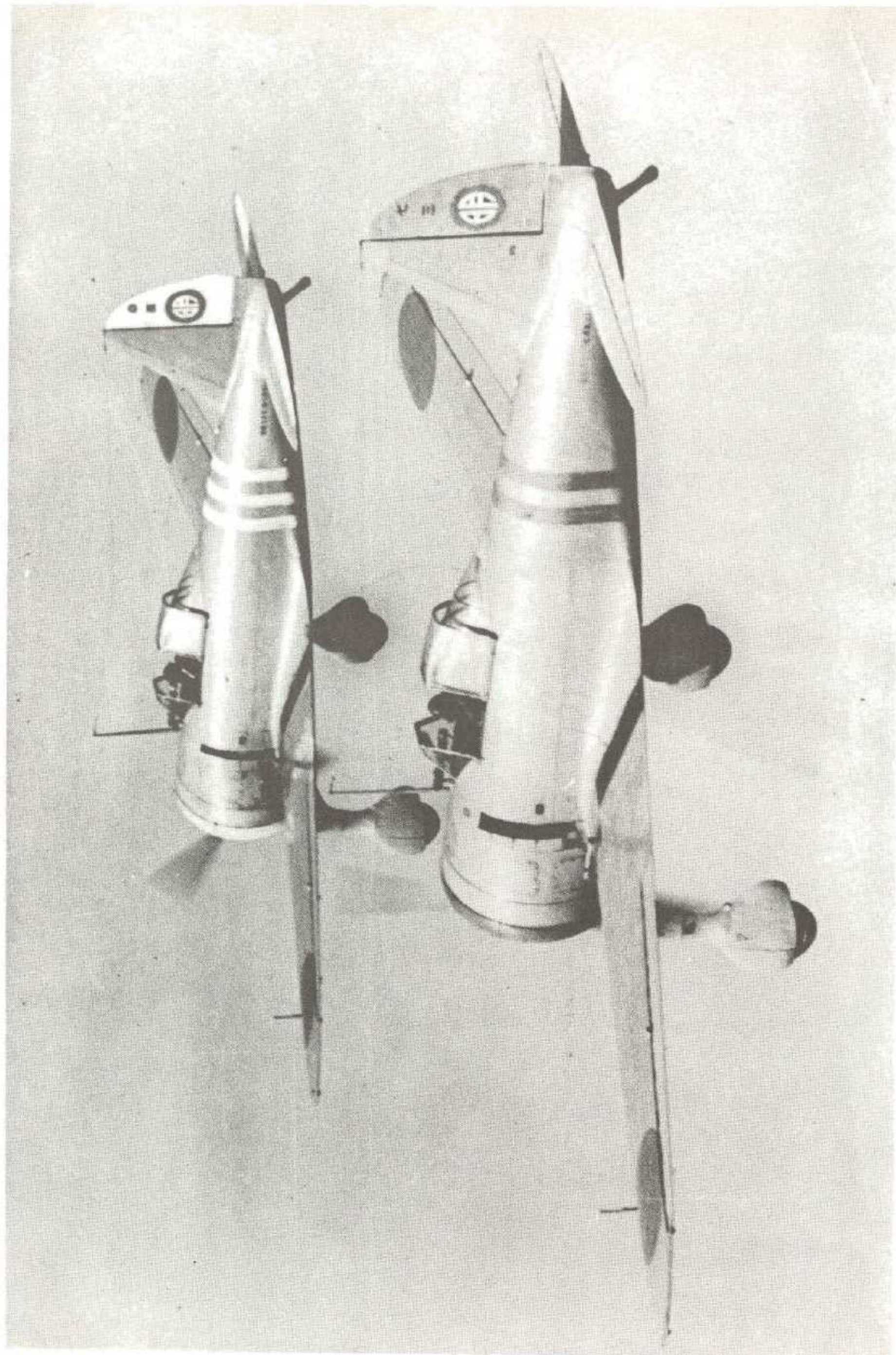


Nakajima Ki.27b, Manchoukuo Air Force. Light gull grey-green overall, see front cover illustration. Presented to Air Force on its 'Aviation Day', September 20th 1942.

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"Training "Nates" carry the markings of the Akeno Army Flying School, circa winter 1941/1942. 2nd Squad aircraft has two fuselage stripes, 3rd Squad three. (Warren D. Shipp via Bueschel).



Corporal Koyama's "Nate" fighter warming up for take-off. Double red stripes denote 3rd Company. Airfield is at Kakogawa in Central Japan. Unit tail insignia of pine tree sprig is symbolic of the Kakogawa area. (S. Koyama via Bueschel).

NAKAJIMA Ki.27 TYPE 97 FIGHTER

Flying high in a new but already combat-weary Curtiss P-40E over Japanese-occupied Luzon in the Philippine Islands on December 13th 1941, less than a week after all-out war had come to the Pacific, Squadron Commander Lieutenant Boyd D. Wagner of the 17th Pursuit Squadron of the United States Army Air Corps raced over the former American airfield at Aparri at the northern tip of the island. His mission was to find out what his squadron back at Clark Field was facing in terms of Japanese air strength in the Philippines. The sight below made "Buzz" Wagner sick, and mad. Only the day before, elements of the 50th Fighter Air Combat Regiment of the 5th Air Army of the Japanese Army Air Force had started to establish themselves at Aparri, and now "Buzz" was right in the middle of the Japanese move to set up the headquarters of the 50th Regiment and units of the 16th Light Bomber Regiment at the base. There on the field, arrogantly lining themselves up along the airstrip as they flew in unmolested from the southern end of Formosa, were scores of small Japanese fighters. The Japanese plan for the invasion of the Philippines was running ahead of schedule, and now the "A Detachment" of the JAAF was occupying Aparri.

Out of anger, and an eagerness to fight that had been frustrated since the day the war began, "Buzz" ignored the purpose of his reconnaissance mission and dropped down to attack. In moments he was fighting for his life in the air as half-a-dozen of the long-legged Japanese fighters came in for the attack. Somehow Wagner had the secret of success against the deadly and unique phenomena of Japanese nimbleness in the air. Tired after their long flight, and up against a skilled American fighter pilot, three of the Japanese Army fighters fell under Wagner's guns in a quick dog-fight over the new Japanese base. Strafing the field after the battle, and watching his slugs hit home, "Buzz" kept shooting until he ran out of ammunition, and then hurried back to Clark to report his news.

Wagner, of Johnstown, Pennsylvania, was soon America's first combat "ace" of the Pacific War. The fighters he met were quickly identified as the "I-97", a low-wing fixed-gear monoplane of the Japanese Army which had been poorly illustrated and described in an Air Corps manual issued only months before. Within the week the tired American and Filipino pilots learned more about the "I-97" than all the words and pictures printed about the mysterious little Japanese aircraft since it first entered combat over three years earlier—for in that one week the JAAF gained complete control of the skies over the Philippines. The same story was repeated

over Malaya, and ultimately over Burma, as the Japanese Army air forces cleared the skies of Allied aircraft to allow the Japanese Army ground forces to advance with impunity. Only a few stubborn exceptions slowed up the Japanese clock of victory, but finally even these succumbed. The "I-97", or whatever it was really called, did its work well.

One could easily get the impression from printed histories of the Pacific War of 1941-1945 that the Japanese Navy's Mitsubishi A6M2 *Zero-Sen* (see AIRCAM No. 16) and the Japanese Army's Nakajima Ki.43 *Hayabusa* (see AIRCAM No. 13) fighters started the air war. The impression is a false one, for these aircraft were only available in limited numbers the day the war began. When the Japanese attacked at Pearl Harbour, in the Philippines, in Malaya and elsewhere in the Far East, less than four hundred *Zero-Sens* were in service, and barely over forty *Hayabusas*. The bulk of the fighting, other than the Imperial Navy's attack at Hawaii, was entrusted to a Nakajima fighter that had been accepted by the JAAF in 1937, carrying the genes of its conception, in the form of a fixed landing gear and radial engine rated at substantially less than 1,000 h.p., into combat in the Second World War.

The fighter aircraft that was available in greater numbers than any other in Japanese service on December 8th 1941 (by the Japanese calendar) was the Nakajima Ki.27 Type 97 Fighter. It was affectionately known as the 97 *Sen* to its pilots and incorrectly called the I-97 in the early months of war by its enemies. Over a thousand had been built by Nakajima in 1940 and 1941 alone, and most of them were still in JAAF service during the first few months of fighting. It was the fighter which gave the Japanese Army most of its early victories in the air against American and British pilots, carrying on a combat tradition established in China and along the Mongolian border, and the fighter which served in more theatres of war than any other until it was ultimately replaced by its offspring, the Ki.43 *Hayabusa*. This is the story of the fighter which for the first time gave Japan parity with the world's best in the late 1930's, and which remained in active service in a variety of forms until the end of mankind's first really global war in August 1945.

Private enterprise prevails

The designing, testing and ultimate mass production of fighter aircraft has always been a sophisticated business. Fighters, from the wood-and-wire contraptions of the Great War of 1914-1918 up to the multi-mach monsters of today, have always been at the head of the State-of-



The Nakajima Ki.27a Type 97 Fighter (background) of 1937 and the aircraft it replaced, the Kawasaki Ki.10-II Type 95 Fighter (foreground) of 1935. (Hiko-Shonen via Bueschel).

the-Art in aeronautics. At no time was this more evident than the middle 1930's. With no apparent Super-Powers leading the way, the vacuum of military and political power was being filled by a host of nations, each reaching out to control their own territorial imperatives, and bumping into each other in the process. At no time in history were the world's national borders more in jeopardy. To hold their lines, "fight for their rights", and reach out for more, all of the Great Powers (a term much in vogue at the time) built military machines suited to their needs. At the top of the weapons list was the fighter aircraft, with each Great Power developing its own types and designs. The result was a profusion of biplanes and monoplanes of widely varying configurations, whose advantages one over the other had yet to be proved, which became known as the "classics" of fighter design.

Japan was rapidly becoming the strongest Great Power in the Orient, with only the Soviet Union, a fragmented China, and the nagging presence of the Western colonial powers standing in her way. To counter these threats, and apply pressure of her own, Japan needed fighters. Under a strict capitalist system, with privately owned companies producing the tools of war on a competitive basis, the Japanese armament industries were dynamic and aggressive. All but ignored by Europe and the Americas, Japanese engineers and technicians studied the best the world had to offer, and then went off on their own. At a time when most potential adversaries of Japan regarded the island Empire's aircraft industry as a "copycat" facility capable only of reproducing foreign aircraft (a theory that sadly remained in vogue until shot out of the skies over Hawaii and Malaya) that industry was doing exactly the opposite. It was developing aircraft that were *better* than any its opposite numbers were flying, and delivering them in larger numbers to the Japanese Army and Navy than its American and Commonwealth counterparts. Only the Russians, as potential opponents, were outproducing the Japanese. Japan's top aircraft manufacturers—Mitsubishi, Nakajima and Kawasaki—were in a Golden Age.

The production and potential profit stakes were high, yet the Japanese Army's procedure of open competition from two or more suppliers, with only one winner, made the risks equally high. Nakajima, for years the major JAAF fighter producer with its Type A-4 *Kosen* Fighter biplane of the 1920's and the Type 91 Fighter 91 *Sen* high-wing monoplane of the early 1930's, was perhaps too complacent as the leader. The firm lost two contracts in a row to Kawasaki, with the Type 92 and Ki.10 Type 95 Fighters, 92 *Sen* and 95 *Sen* biplanes establishing themselves as the standard fighters of the JAAF. Mitsu-

bishi, confident in its ability to sell an Army version of the highly successful 9-*Shi* Naval fighter monoplane as the Ki.18, was equally bruised. When Army Air Headquarters opened up the next-generation fighter competition in June 1935, asking Mitsubishi, Nakajima and Kawasaki for two prototypes each of a modern fighter superior or at least equal in performance to the best on foreign drawing boards, Kawasaki had the inside track.

While competition between producing firms was tough, the competition between the two Japanese military services was even tougher. The Japanese Navy disliked the idea that the Japanese Army knew anything about its aircraft, and vice versa. Mitsubishi had solved the problem years earlier by separating both its design and production facilities, while Nakajima continued to use the same engineering department and plant at Ota to produce for both services, with the Imperial Navy's A4N1 Type 95 Ship-Based Fighter 95 *Kansen* in production there at the time the new Army fighter competition was announced. It was a small point, but stacked up as another black mark against Nakajima. Kawasaki was once again the psychological winner, for the firm had no Navy business, restricting its attention to the JAAF.

Realizing its position of vulnerability, and wishing to grow as rapidly as possible now that orders were forthcoming, the Nakajima board of directors voted to create two design departments, one each for the Army and Navy, with designers crossing over to work on civil and export projects. The selection of designers for each department was difficult, but by early 1935 the Army Design Section at Nakajima was a fact. Dr. Hideo Itokawa, a quiet, professorial student of international fighter design, found himself the key man in the new department, for Nakajima management had decided to build a fighter of their own design on a private venture basis. Itokawa was supplied with project authorization for the Nakajima Type P.E. (Pursuit Experimental), assigned a staff of designers and engineers of his own choosing, and given the go-ahead to start work on the first aircraft to be developed by the Army Design Section. It was months before the JAAF fighter competition was announced in June of the same year.

This point was to give Nakajima trouble in later months, for Kawasaki's management and "friends in the government" howled that Nakajima knew about the competition before Kawasaki—the Army's leading fighter supplier. As a result, Nakajima (and Mitsubishi, but for quite another reason) delivered its prototypes early while Kawasaki struggled to create a modern fighter under an almost impossible deadline, delaying the final competition evaluations by months. According to Kawasaki, this gave Nakajima the time to "iron out its bugs" while evaluation of the Kawasaki offering was based on its rough prototypes. Perhaps Nakajima did have advance warning, and an information "leak" may have started the whole Type P.E. project. But whatever the reason, when the JAAF fighter competition was announced, the Type P.E. was well on the way to conceptual completion, with its design submitted for JAAF consideration as Army Project No. 505. In spite of Kawasaki's prime position in the competition as the leading fighter producer of record, even the JAAF development number assignments reflected Nakajima's fast reaction time. Project No. 505 gave Nakajima the Ki.27 number while Kawasaki got the Ki.28 designation. Mitsubishi, expected to create an entirely new Army fighter design, also delayed its offering, finally submitting data for an extensively modified version of its earlier Ki.18 which received the Ki.33 designation.

The first of two Type P.E. prototypes was completed in July 1936, with the second completed in October for the Army competition as the Ki.2701, the latter incorporating changes based on the JAAF specifications. Of truly modern design with its low monoplane wing, yet retaining the fixed undercarriage and open cockpit of earlier designs, the Ki.2701 first flew under Nakajima's control on October 15th 1936 at Ojima Airfield. Mitsubishi, modifying an existing A5M2 airframe, completed its Ki.3301 prototype in August 1936, while Kawasaki's

radically new Ki.2801 model was not finished until November. One month later Nakajima had already completed its second Army prototype as the Ki.2702, incorporating a wing of increased area to enhance its manoeuvrability. By the end of the year both Mitsubishi and Kawasaki had hurriedly turned out their Ki.3302 and Ki.2802 prototypes, and early in 1937 JAAF trials began at Tachikawa. They were to run for almost a year.

The new fighter trials were the most exciting ever undertaken by the JAAF, for it was the first time that the Army was testing aircraft which exceeded 300 m.p.h. in level flight. The Ki.28 barely topped this mark at 13,000 feet in one test when it hit 485 km./hr. at 4,000 metres. Mitsubishi's Ki.3302 came close at 474 km./hr. at a thousand metres below the Ki.28's performing altitude, while Nakajima's Ki.2702 hit 468 km./hr. at 4,000 metres, or some 17 km./hr. slower than the Kawasaki fighter. But speed was not the ultimate determining factor, for in performance and manoeuvrability the Ki.2702 had no peers. Dr. Itokawa had been aiming at the creation of an all-metal monoplane which weighed less than the Kawasaki 92 *Sen* and 95 *Sen* biplanes then in service, in order to retain the manoeuvrability of the biplane while adding the speed and durability of the internally stressed monoplane. Careful design, ultra-light structures, Nakajima's new N.N. (Nippon-Nakajima) wing section, thin dural skinning and a light armament of only two 7.7 mm. machine guns brought the completed Ki.2702 prototype in at some 200 pounds less than the Ki.3302 prototype, with both aircraft having the same Army-specified Nakajima Ha.1a 9-cylinder radial power plant of around 700 h.p. Compared to Kawasaki's Ha.9-IIa inline engine of around 800 h.p., the Ki.2701 was over 500 pounds lighter, and like a feather-in-the-wind beside Kawasaki's "Flying Brick". In the manoeuvrability tests the Nakajima Ki.27 prototypes flipped all over the sky. A change in wing incidence on the Ki.2702, to increase it by $1\frac{1}{2}$ degrees, even improved these characteristics. In climb, the Ki.2702 could get up to 3,000 metres in 3 minutes and 2 seconds; the brutish Ki.28 was only 8 seconds faster, and the Ki.33 was 14 seconds slower. As a result, Nakajima came out of the competition with the only follow-on order, with a JAAF request for an additional ten pre-production prototypes for final evaluation. Between June and December 1937 prototypes Ki.2703 to Ki.2712 were delivered to the Army. They differed from the earlier prototypes in having enclosed cockpits, an even larger wing area with the addition of about ten square feet, and a redesigned cowling, cockpit and tail surfaces. On December 28th 1937, after almost twelve months of testing the Army finally gave production authorization to the Ki.27 as the Army Type 97 Fighter, much to the anger and loud complaints of Kawasaki and Mitsubishi. It was the last open fighter design competition to be conducted by the JAAF.

The Army goes monoplane

To Army pilots steeped in the individual-combat tradition of the Great War, the new 97 *Sen* was a fabulous mount. JAAF pilots returning from China in the autumn and winter of 1937-1938 were given the opportunity to test the pre-production Ki.27 prototypes. Soon the word was out that the Army would have a new fighter which was not only better than anything they had met in China—it was even better than the Japanese Navy's 96 *Kansen*.

Production, which immediately began at the Ota Plant in December 1937 as the Ki.27 Type 97 Fighter Model A, soon reached an average of over twenty units a month. Power plant was the improved Ha.1b of 710 h.p. which also entered production as a Type 97. By June 1938 the new Army flight instruction manuals had been evaluated in Ki.27 flight training at the Akeno Army Flying School, and the revised and corrected manuals were issued for service use. By July the first line-unit training operations were under way when a crack group of former Ki.10 95 *Sen* Army pilots, led by Captain Tateo Kato, returned to the 2nd Fighter Air Battalion at Tachikawa flying their new 97 *Sens*.

In anticipation of the new Ki.27a, as well as other

modern monoplane bomber and Army co-operation types, the JAAF had just undergone a reorganization of combat units based on early experiences in China. When the "China Incident" began in July 1937 the JAAF was formed into Air Regiments, equivalent to American Groups, with each regiment including fighter, fighter-bomber, bomber, reconnaissance and transport Companies, or squadrons, as required for the assigned mission of the regiment. Fighter Companies were attached to the 1st, 3rd, 4th, 5th and 13th Air Regiments in Japan; the 6th, 8th and 9th Air Regiments in Chosen; and the 11th and 16th Air Regiments in Manchoukuo.

The demands of active combat soon made it evident that this organizational format would not meet the military needs at hand, and with the advent of the new 97 *Sen* the fighter forces were reorganized later the same month.

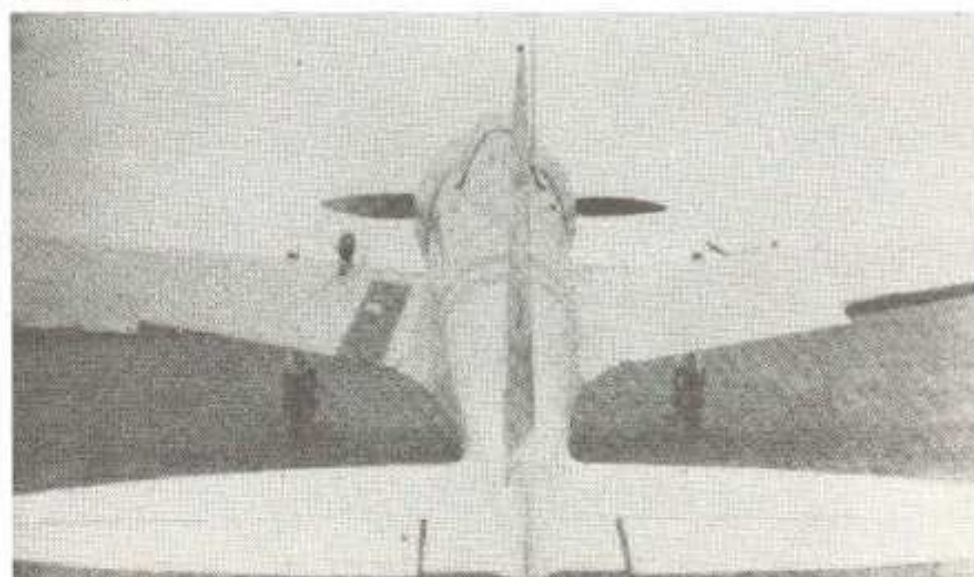
The first step was to reform the 2nd Battalion of the 5th Air Regiment into the 2nd Fighter Battalion in July 1937, flying the Ki.10 and later the Ki.27a; and the 2nd Battalion of the 4th Air Regiment into the 8th Fighter Battalion in September 1937, flying the Ki.10. Each of these new fighter Battalions had three Fighter Companies of 12 aircraft each, plus three reserves, attached to them, giving a total of 45 fighters for each unit at full strength.

The following year, starting on July 1st 1938, this format was again revised to establish the organization used throughout the Pacific War. The new structure was based on the assignment of an Air Army to a geographical area. The JAAF Air Army, equivalent to a wartime American Army Theatre Air Force, including a number of Air Divisions, corresponding to American numbered Air Forces. The number of Air Divisions depended on the operational requirements and in general included from two to three Air Brigades, equivalent to USAAC Wings, or Divisions. Each JAAF Air Brigade consisted of two or three Air Regiments, the basic element in the JAAF organizational structure, with each Regiment having its own colourful unit insignia. The Regiments, or Groups, were based on function, with Fighter Regiments having 45 to 48 aircraft. Each Regiment was then broken down into three Companies, or squadrons, for operational assignments. The final JAAF tactical unit was the Squad, or Flight, of from three to four aircraft.

As fast as production deliveries permitted, old units were converted and new units were formed to fly the new Army fighter. On July 1st 1938, the 59th Fighter Regiment at Kagamigahara, Japan, was officially formed as the first unit to fly the Ki.27a exclusively. On the same day the former 3rd Fighter-Reconnaissance Regiment at Kainei, in China, was re-designated as the 9th Fighter Regiment, flying the 95 *Sen* and ultimately the 97 *Sen*. On July 27th the 8th Fighter Battalion officially became the 77th Fighter Regiment at Nanking, China, and began to receive its 97 *Sen* fighters. This regiment was later to become one of the best known 97 *Sen* units, fighting against the "Flying Tigers" and RAF in Malaya and Burma, and flying its Ki.27 fighters as first-line combat equipment for five years, or well into the summer of 1943.

On August 1st 1938 the 2nd Fighter Regiment, commanded by Captain Tateo Kato, became the 64th

The long, lean lines of Professor Itokawa's design remained a pattern for Nakajima's later Ki.43, Ki.44 and Ki.84 fighters. (Sora via R. M. Bueschel).



Fighter Regiment and took its new position at Shotoku, in the Japanese Protectorate of Manchoukuo on the Asiatic mainland. A new unit, the 33rd Fighter Regiment, was formed at Kyoju, China, on the same day, flying both the 95 *Sen* and 97 *Sen*. From then on the formation of new units was rapid, with the 9th and 10th Independent Fighter Companies in Manchoukuo starting out with 95 *Sen* fighters which were rapidly replaced with the Ki.27a. On August 30th 1938 the 13th Fighter-Attack Regiment was formed at Kakogawa in Japan with Ki.10 and Ki.27a equipment. The next day four new 97 *Sen* units were officially formed. On that day the 2nd Reconnaissance and 4th, 5th and 11th Fighter Regiments in China, Formosa, Japan and Manchoukuo respectively began to receive the Ki.27a as original equipment. By the end of the year two more 97 *Sen* units had been formed, with the 24th Fighter Regiment established at Hairaru in Manchoukuo on September 1st; and the 1st Fighter Regiment under the command of Lieutenant-Colonel Toshio Saito becoming operational on November 5th.

By the end of 1938 Nakajima had produced over 300 of the Ki.27a fighters, and was already making plans for the production of the improved Ki.27 Fighter Model B—the Ki.27b. The new features were refinements rather than radical changes. The Ha.1b powerplant and 18.56 square metre wing were retained. Fine points of design included a more streamlined cowling and oil cooler, a completely glazed cockpit cover to make the Ki.27b the first fighter used in the Second World War to have an all-around vision “bubble” cockpit, new bomb and auxiliary tank racks, and the addition of a two-way radio on some models, with a tall radio aerial mast on the fuselage revealing its presence. The Ki.27b retained the twin 7.7 mm. machine gun armament of the Ki.27a, as the light airframe could not carry much more without a great loss of manoeuvrability. This lightness of structure and armament would cost the 97 *Sen* dearly in the months and years ahead.

In order to keep the production impetus going, and to establish the manufacturing base that the military services needed for equipment and supplies, the Japanese Diet passed laws in 1938 which gave certain tax advantages to aircraft producers capitalized at a minimum of 3 million yen. The government also provided financial grants to help Nakajima expand its facilities which led to the construction of the Nakajima Koizumi Plant outside Ota for the production of naval aircraft. This allowed the original and expanded Ota Plant to be devoted completely to the production of Army aircraft, with the 97 *Sen* the most important model. At a time when the United States was producing Seversky P-35, Curtiss P-36 and Curtiss P-40 fighters in lots of 76, 210 and 200 respectively between 1937 and 1939, Nakajima was turning out greater numbers of 97 *Sen* fighters alone. 1939 production was 343 aircraft, with 590 in 1940, 433 in 1941, and an additional 289 in 1942 before production ended at Ota in November of that year. By the time the Ki.43 Type 1 Fighter *Hayabusa* completely replaced the 97 *Sen* in production, Nakajima had built 2,019 of the Ki.27 fighters, including prototypes. In that period Nakajima

had also grown from a middle-sized aircraft producer to the second largest firm in Japan, challenging Mitsubishi for the top position, with much of this gain due to its success with the Ki.27.

Attempts were also made to have other producers build the 97 *Sen*, but the results were not significant. Tachikawa, a smaller producer of JAAF aircraft, received an order for fifty Ki.27b fighters which it produced in a sixty-day period between December 1938 and February 1939 utilizing Nakajima equipment. Cooperation between the two firms was not new, for Tachikawa had also produced Nakajima 91 *Sen* Fighters between 1932 and 1934. There were reports that the Manshu Aeroplane Manufacturing Company at Harbin in Manchoukuo had also produced the Ki.27b. Careful review of the production records of this firm do not bear this out, although Manshu did develop and produce the two-seat 2 *Koren* trainer described later, which utilized the basic Ki.27 airframe.

Into the arena

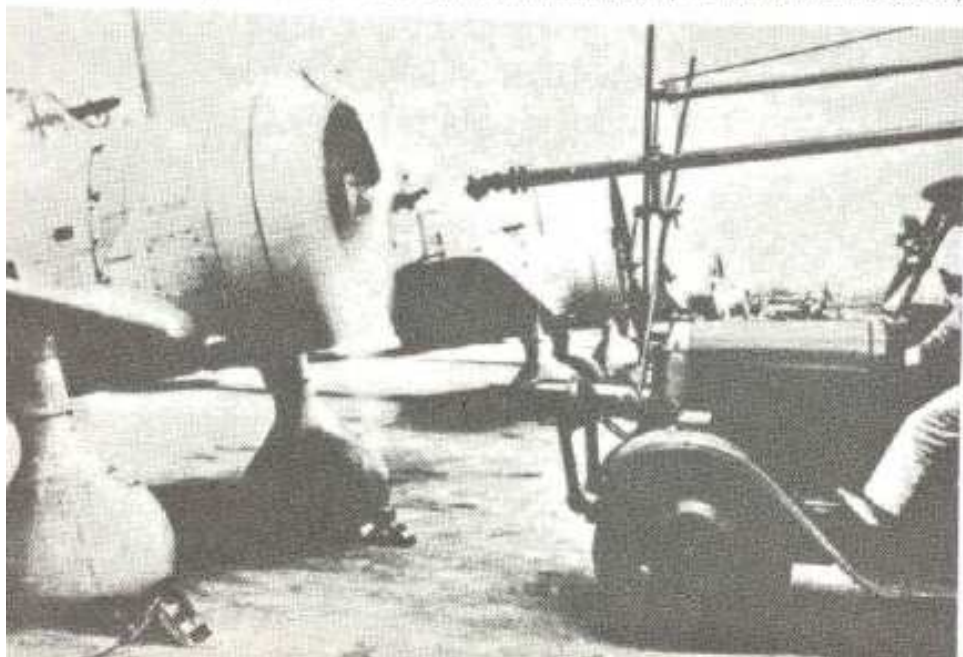
Reaching China in the summer and autumn of 1938, the 97 *Sen* was on hand just as the “China Incident” warmed up again in a Japanese attempt to resolve the war by arms. As the operation against Hankow got under way the 97 *Sen* fighters of the 77th Fighter Regiment were used to gain control of the skies over Central China. Flying largely against American-built Curtiss *Hawk III* fighters of the Chinese Air Force, the Ki.27a soon became the commander of air over the Japanese columns moving west of Chiangpei and Chiangnan. By November, the 97 *Sen* was flying without challenge over the tri-cities of Wuchang, Hankow and Hanyang, controlling the skies as the Wu-han complex fell to the Japanese Army.

Early in February 1939 the 97 *Sen* fighters in China supported the invasion of Hainan Island, and by March 27th they were supporting Army ground troops as they stormed Nanchang. In May, with complete control of the air, the 97 *Sens* were used to strafe the large masses of Chinese troops fleeing the Japanese forces in Honan Province, as the front collapsed and the Chinese retreated deep into the interior to continue the war through resistance rather than the confrontation of troops. It was also during this period that the Army took the time out to allow the filming of *Moyoru Ozora*, “The Flaming Sky”, Japan’s first combat aviation movie in which 97 *Sen* fighters shot down imaginary Chinese fighters, specially painted 95 *Sen* fighters in Chinese insignia.

It would appear that all was going well for Japan on the mainland, with the exception of some minor border problems in the north with the Soviet Union. Ever since the Japanese had bested the Russians at Port Arthur in 1905 in the first modern military match between Orientals and Europeans, both sides were spoiling for a fight. The Russians wanted to prove that the Japanese were just lucky the first time while the Japanese wanted to show that the Communist Red Army was just as soft as the old Tzarist Romanov Army. Probes were made throughout the 1920’s and early 1930’s, and the tension finally came to a head on July 11th 1938 when the Russians charged up Chankufeng hill on the border where Japanese-occupied Chosen and Manchoukuo met Russian Siberia, claiming the land as their own. The Soviets dive-bombed the Japanese Army positions at Chankufeng, bombed the railroad yards and bridges along the Tumen river between Chosen and Manchoukuo on August 1st, and sent Tupolev SB-2 bombers escorted by Polikarpov I-15bis fighters over Japanese headquarters at Hsinking, Manchoukuo, on August 6th. The Japanese claimed the destruction of five Russian aircraft on the August 1st raid, and more in Russian raids at Rashin and the port of Yuki in Chosen. The Russians claimed they didn’t attack any positions outside of their own territory, with the Japanese backing down to avoid a fight and agreeing on August 10th to let the Russians keep the hill at Zaozernaya, the site now known by its Russian name.

Wild claims followed, with the JAAF insisting it shot down hundreds of Russian planes in the month of battle. The Russians counter-claimed the destruction of over

While the Type 97 Fighter was the most modern fighter in the Orient, its starting methods were still rather archaic. (M. Toda via Bueschel).



200 Japanese aircraft. The result was a galvanising of Japanese concern, and the rapid movement of airpower to Manchoukuo to control any further Russian attacks designed to weaken Japan's tightening hold on China. The next incident was nine months in coming, and this time it led to all-out war. Mongolian-Manchoukuoan border skirmishes began early in May 1939. The Japanese started the air fighting by shooting down a Russian R-5 reconnaissance plane on May 20th over the Khalkin Gol river in Outer Mongolia—a Soviet satellite nation bordering Manchoukuo. Russian planes, theoretically supporting and defending the Outer Mongolians, counter-attacked by bombing Japanese airfields in Manchoukuo. In the first air battle Japanese fighters shot down nine Russian aircraft, losing three of their own. Both sides quickly committed tanks, aircraft and troops to the battle. Japanese forces, invading Mongolia and precipitating tank battle in the Gobi Desert, attempted to cut the Trans-Siberian railway and isolate the Russian/Mongolian forces. Russian and Mongol troops, led by Corps Commander Georgii Zhukov, later the saviour of Moscow in the Second World War, fought back and ultimately defeated a Japanese force of over 100,000 troops in a ten-day battle along the Khalkin Gol river in late August. The Russians still celebrate this massive victory.

While the ground fighting progressed, the fighting in the air was the greatest the world had seen since the war of 1914-1918 in Europe. 97 *Sen* fighter units were rushed to the front to combat the Soviet menace. The 59th Fighter Regiment left Japan, and the 1st Fighter Regiment was pulled out of China, reaching the advance bases at Nomonhan in June. The 11th, 24th and 64th Fighter Regiments, located in Manchoukuo, held the line with the help of 95 *Sen* units against the enormous Soviet Far Eastern Air Force until the reinforcements arrived. In a matter of weeks the original eighty 97 *Sen* fighters, continually reinforced by new units and deliveries of the improved Ki.27b, were knocking the Soviet I-15bis fighters out of the sky in wholesale lots, and the Nakajima Type 97 Fighter became the most famous fighter in the Orient. Once again, as in 1905, original weapons developed in Japan were proving to be superior to the products of European engineers.

By the end of May the JAAF claimed it had shot down 59 of the Russian and Mongolian aircraft, and had literally chased the communists out of the skies. After a lull, the Russo-Mongolian air forces came back on June 18th, reinforced with modern Polikarpov I-16 monoplanes. It has been widely reported that this led to a Japanese defeat in the air, but the facts suggest just the opposite. Japanese claims, while inflated, were still based on fact, and even the Russians diffidently admit to the loss of more aircraft than they claim they shot down. The JAAF, despite brutal losses, regarded the Nomonhan fighting as a major victory, and a credit to the 97 *Sen*. As the Japanese suffered a defeat in their invasion attempt, it would appear that the Japanese Army on the ground was the loser—but not the Army Air Forces. The number of Japanese "aces" alone suggest that the Russians took serious losses, while the JAAF built up a cadre of skilled combat pilots. JAAF weaknesses in organizational structure, as well as tactics, were quickly revealed, and just as quickly corrected whenever possible. By late June the aerial combat exceeded any the world had yet seen, although it was barely reported in the Western press. In just four days, between June 22nd and 26th, the Japanese shot down 88 of the enemy planes, if their press releases can be believed. On the 27th of June a dogfight took place between over 200 Russian planes and a lesser number of Japanese fighters, with the JAAF claiming the destruction of 98 of the Russians, most falling to the guns of the 97 *Sen*.

As the air fighting dragged into July and August, new 97 *Sen* units entered the battle. The 9th Fighter Regiment flew in from China, while the 9th and 10th Independent Fighter Companies were equipped with the 97 *Sen*. Flight Warrant Officer Keizo Hamada, the pilot of a Kawasaki Ki.32 Type 98 single-engine light bomber, who

took part in the battles along the Khalkin Gol in August, summed up the JAAF respect for the 97 *Sen* fighters and their pilots when he reported after a mission: "Billows of smoke and sand dust formed a high screen from the point where the Khalka and Holsten rivers meet spreading eastward. I could see dozens of burning tanks and planes on the desert, and above our heads we could see our famous fighters escorting us. Twenty or thirty I-16 fighters swooped down for an attack. There were only five of our new type of fighters, but they dropped into the midst of the enemy fighters for a courageous air battle. Soon I saw five enemy fighters billowing black smoke".

The 97 *Sen* pilots became famous as the Japanese press extolled their victories. When Captain Kenji Shimada, commander of the 1st Company of the 11th Fighter Regiment, shot down eight Russian aircraft near Harbin in one dog-fight on May 27th, he became the hero of the Japanese schoolboys who would later become the combat pilots of the Pacific War. This was at a time when their American counterparts were worshipping baseball heroes. Shimada went on to score 40 "kills" in the Nomonhan fighting and earned the title of the "Red-legged Hawk" for the red-decorated wheel spats of his Ki.27a. Sergeant-Major Hiromichi Shinohara, in Shimada's 1st Company, scored over 50 "kills" and was dubbed as the "Richthofen of the Orient" by an enthusiastic Japanese reporter. He came out of the fighting as a Warrant Officer, an almost impossible achievement under the Japanese Army restrictions of rank by birth. Sergeant-Major Yoshiyama, in the same 1st Company, scored an additional 25 "kills", with the three pilots accounting for the loss of 123 Russian aircraft. Yoshiyama gained the title of the "Warrior of the Holomble Plateau" after his birthplace.

Many of the famous Army "aces" of the Pacific War scored their first "kills" over Manchoukuo and Mongolia that summer. The legendary Tateo Kato, commander of the 64th Regiment, added to the score he started earlier over China. Young Isamu Kashiide, who went on to become a Captain and the leading B-29 killer over Japan in 1945, flew a Ki.27b at Nomonhan and shot down seven I-15bis and I-16 fighters in the fighting. Other Pacific War "aces" who scored their first victories over the Khalkin Gol were Saburo Togo, later commander of the 1st Fighter Regiment; Warrant Officer Takahashi of the 11th Regiment; Lieutenant Sada Koga, who was later killed flying a Ki.43 *Hayabusa* in New Guinea; Sergeant-Major Chiogi Saito of the 24th Regiment; Lieutenant Morikichi Kamae, who survived the Pacific War as a Ki.100 5 *Sen* pilot; Warrant Officer Nakada of the 33rd Regiment, later killed in New Guinea; Captain Yasuma of the 64th Regiment; Sergeant-Major Katsuaki Kira, who survived the war with 25 "kills"; 2nd Lieutenant Masako Saito, later killed in New Guinea; Warrant Officer Sumi Kamito, who survived the war with 40 "kills"; Warrant Officer Tokuyasu Ishizuka, who later flew the Ki.61 *Hien* and shot down four B-29's; Captain Hidemasa, with 44 "kills" by August 1945; and 2nd Lieutenant Aoyanagi, who died in Manchoukuo in 1941 with a score of 28 "kills" to his credit.

97 *Sen* pilots who achieved greater individual fame included Lieutenant Yasuhiko Kuroe, who became a JAAF

The first unit to receive the Type 97 Fighter goes to China. The 59th Regiment left Japan late in 1938. Ki.27a models of the 1st Company are shown in China in early December. (Asahigraph via Bueschel).





Mechanics of the 59th Regiment fit their Ki.27a aircraft for drop tanks. Tank at lower right shows flat top that fit flush to bottom of wing in-board of fixed landing gear. (Asahigraph via Bueschel).

test pilot and a Major; Lieutenant Ryotaro Kamibo, who survived the Pacific War with 76 "kills"; and Sergeant-Major Hanada, who was killed in action over Nomonhan after he had scored a total of 23 "kills" in a few short months.

The fighting ended after the Japanese repulsed the Russian and Mongolian troops who entered Manchoukuo after their victory on the river. On September 10th the last communists were pushed back over the Khalkin Gol. The Japanese did not pursue them and an agreed cease fire became effective at 2 p.m. Moscow time on September 16th. In what it called "one of the greatest military achievements in the annals of aviation", the official Japanese Army Information Section report of the fighting at Nomonhan claimed that 1,340 Russo-Mongolian aircraft were shot down from May through September 1939, with an additional 30 destroyed on the ground in a raid on the Mongolian airfield at Tamsk. The Japanese admitted a loss of 120 of their own aircraft. The Russians counter-claimed that they had only committed 450 aircraft to the fighting, and that they destroyed 215 Japanese aircraft by the end of August. One Russian report said that the Japanese had lost 25 fighters out of a force of 60 engaged in a dog-fight with the Russians, while the Russians only lost two of their aircraft. In the light of scrutiny the Russian claims, long regarded as reasonable, seem ridiculous. American Intelligence, deeply interested, came up with an even more wildly different estimate, crediting the Russians with victory and the JAAF with a loss of 500 aircraft and 150 pilots. Whoever "won", the fight was actually a draw. Both sides kept at arm's length, even after signing a non-aggression pact, while the newly-formed JAAF Counter-Soviet Patrol of 97 *Sen* fighters patrolled the borders until the middle of the Pacific War.

The Nomonhan fighting had the effect of reducing the

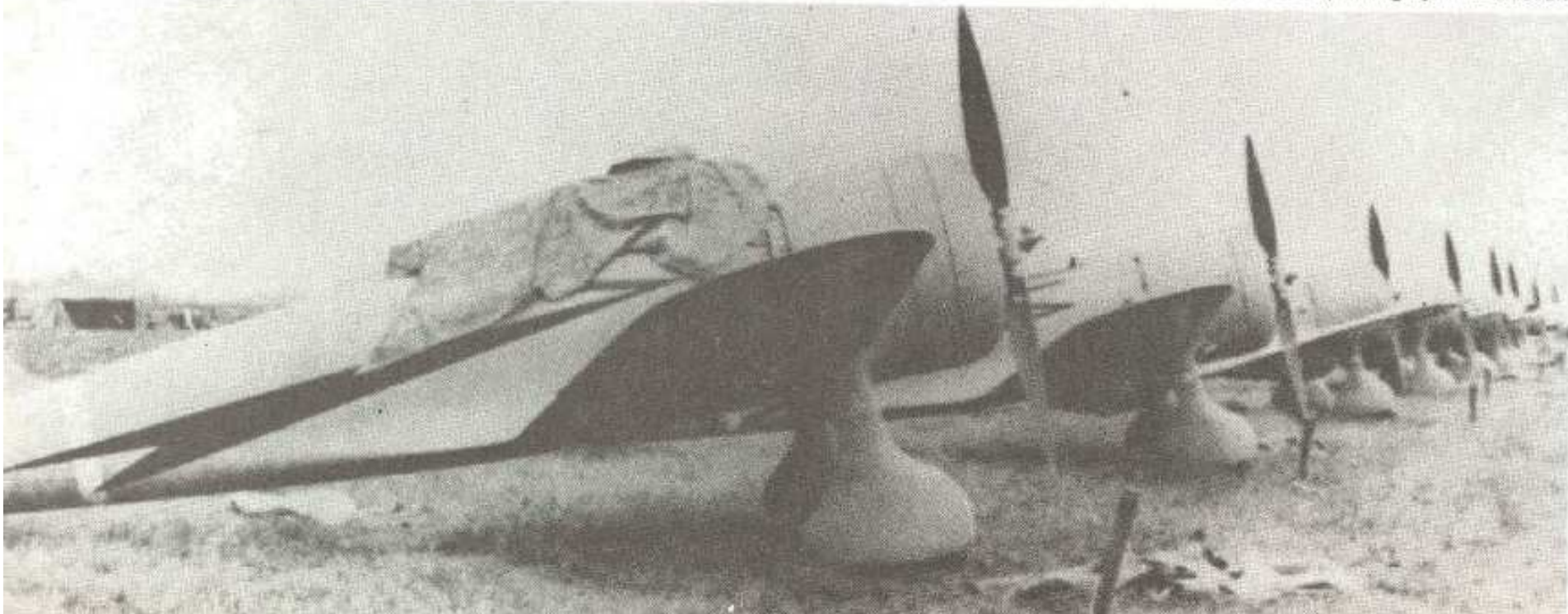
tension and fighting in China, and led to a complete overhaul of the JAAF, licking its wounds and girding for a war in the Pacific at the same time. Between the end of the fighting and Pearl Harbour, the JAAF put some ten new Ki.27b units into the field. The 3rd "Nagano Company" of the 64th Regiment, named after its commander, became the 84th Independent Fighter Company on July 1st 1939 and was assigned to special duty in China. New regimental formations were delayed while the JAAF reorganized, with only the 50th Fighter Regiment being organized at Taichu, Formosa, on September 10th during the year 1940. By early 1941 the revitalized JAAF 97 *Sen* fighter force began to expand, with the new 87th Regiment formed at Harbin, Manchoukuo, on March 1st. The 206th Home Defence (interceptor) Regiment became operational in Japan the same day, followed by the 85th in China on March 7th. In July the 68th Regiment joined the patrol force at Harbin on the 24th, with the 54th Home Defence Regiment formed at Kashiwa in Japan on the 26th, followed by the 70th and 144th regiments in Japan on July 30th. On November 1st, slightly over a month before the Pacific War began, the 244th Regiment was reformed out of the 144th and flying the Ki.27b for the air defence of Tokyo. On the eve of the Pacific War the JAAF had over 600 modern fighters in line service, flown by a skilled force of pilots, with over half experienced in air combat.

It was also during this period that the first trainer variants of the 97 *Sen* began to make their appearance. Ki.27a and later Ki.27b models had long been used at the Akeno Army Flying School to train pilots in the operational use of the 97 *Sen*. Examples were also sent to the Army Air Academy and the Army Aviation Maintenance School. These were standard combat models which differed little, if at all, from the 97 *Sen* flown by the service units. By late 1939 one model of the Ki.27a was flying with open wheel spats, with examples assigned to the 1st Fighter Regiment for training at Kagamigahara. A trainer model, designated the Ki.27a-Kaizo as the Type 97 Trainer-Fighter Model A had the wheel spats completely removed, and often had the tail cone below the rudder missing to expose the tail skid. The skid was replaced with a tail wheel on some examples. The 97 *Rensen* was assigned to the Akeno, Kumagaya and Tachiarai Army Flying Schools. The Ki.27b was later modified in the same manner.

The world at war

When Japan occupied French Indo-China for its "protection" in the summer of 1941, 97 *Sen* units were moved within striking distance of Malaya and the Dutch East Indies. The independent 84th Company, and ultimately the 1st, 11th, 33rd, 50th, 59th, 64th and 77th Regiments, rotated through the new Japanese bases in South-East Asia. The planning and timing of Japan's attacks on the colonial outposts of Europe and America after November 1941 were worked out to the day. The two major invasion efforts were to be in Malaya and the

The flashy Ki.27a fighters of the 59th under protective wraps in China early in December, 1938. (Asahigraph via Bueschel).

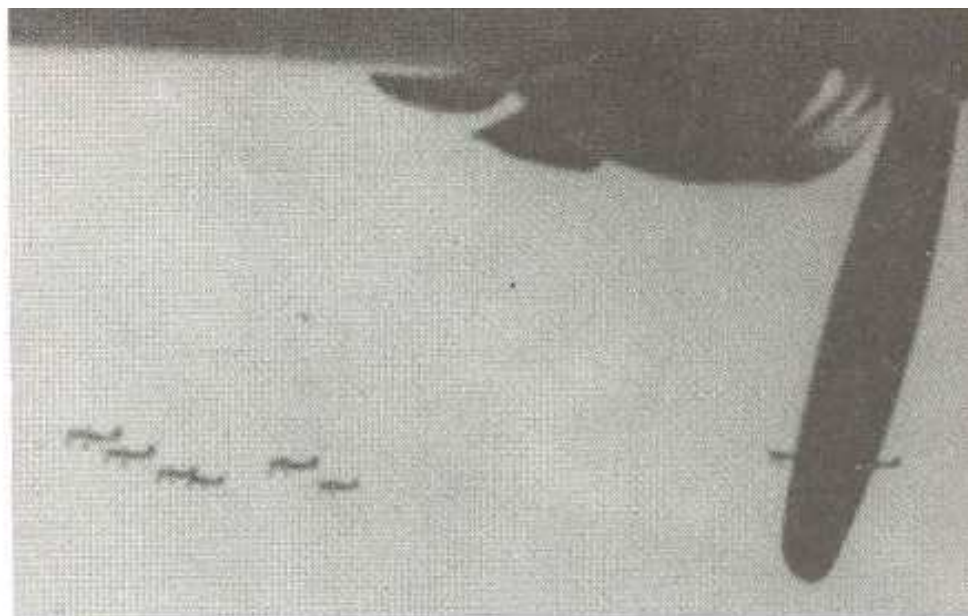


Philippines, both spearheaded by JAAF fighter units flying the Ki.27b, with a smattering of new Ki.43 *Hayabusas* assigned to the 64th Regiment in the Malayan operation.

The first signs of overt activity came on the morning of December 3rd 1941 (Japanese time), when the 77th Fighter Regiment was ordered to defend Hainan Island against attack. The only threatening air forces in the area were British, or Dutch. Between December 4th and 7th the 77th Regiment was flying cover over the invasion convoy headed for Thailand and Malaya. Other 97 *Sen* units in Indo-China were poised for the Malayan assault from their new airfield on Phoquoc Island, a base that helped to extend the range of the Ki.27b fighters to bring them within striking distance. Following the attack against Pearl Harbour on the morning of December 8th, the Japanese landing forces began to unload at Singora and Pattani in southern Thailand and at Kota Bharu in northern Malaya. After a one-day battle with the Thai Air Force to the north and the R.A.F. over Kota Bharu, the JAAF reinforced its fighter participation and by the next day the invasion was going according to schedule. Once the northern airfields were occupied, the JAAF was able to gain complete control of the skies. The battle for Malaya and Singapore was on. In a campaign so rapid and disastrous that it angered Allied forces fighting elsewhere in the Far East, Malaya succumbed and Singapore was under siege by late January 1942. By February 15th Singapore had fallen, and the JAAF could turn its eyes and full forces on Rangoon and Burma to the north.

In the Philippines the story was repeated, only it took longer. Fear of American air strength dictated a plan of aerial attack designed to destroy the defending American and Filipino air forces, with an invasion to follow. The JAAF's 5th Air Army was moved from Manchoukuo to southern Formosa, including 72 97 *Sen* fighters of the 24th and 50th Fighter Regiments and the 84th Independent Fighter Company. The operational plan worked out in a joint Army-Navy conference in the middle of November 1941 called for a division of responsibility, with Army Ki.27b fighters striking at targets north of 16 degrees north latitude and naval *Zero-Sen* fighters handling everything south of this line, due to their greater range. The first order of business was to capture the airfields at Aparri, Vigan, Laoag, and others in rapid succession, in order to base Army fighters there quickly and gain command of the air.

The JAAF fighters took off before dawn on the morning of December 8th (Japanese time), from their southern Formosan bases at Heito, Koshun, Chosu and Kato. Just as the Americans were waking up to their seven o'clock alarms—actually eight o'clock by Japanese time—the fighters struck the airfield at Tuguegarao and the barracks at Baguio on Luzon. The first ground troops seized an airbase the same day, and by the next day fighters were landing there. The 24th Regiment flew into Vigan on December 11th, and the 50th Regiment started to land its 97 *Sen* fighters at Aparri on December 12th. These bases, and the almost total destruction of the defending air forces by naval bombers and fighters to the south, made the 97 *Sen* the master of the skies over northern Luzon. Only sporadic attacks, like "Buzz" Wagner's, caused any trouble. Moving south, 97 *Sen* fighters were based at Carmen by December 27th. When the trapped Philippine defenders herded their battered forces on to Bataan and Corregidor it looked as if the Philippines campaign was all but over. In a wave of optimism, the 5th Air Army was released for use in Burma and the Dutch East Indies. Only the 3rd Company of the 50th Regiment remained at Clark Field, while the remainder of the 24th and 50th Fighter Regiments flew out to more active theatres of war. The remaining Army Air Forces could not handle the final assault alone, and it was not until help arrived from the Japanese Navy Air Forces, and the ground forces under General Homma learned how to assault the American strong points, that the Americans surrendered on May 7th 1942. They had set the Japanese timetable in the Philippines back by at least four months.



The 59th flies its Ki.27a fighters over North China in January, 1939. (Asahigraph via Bueschel).

It was in Burma that the most direct confrontation of the 97 *Sen* and Allied fighters took place, and the results were brutalizing. The JAAF 3rd Army, later supported by the 5th, flying from bases in Thailand, was opposed by about 50 British, Australian and New Zealand pilots based around Rangoon with almost-useless Brewster Buffaloes and about 25 Americans of the American Volunteer Group flying Curtiss P-40C's. Later reinforcements for the small Allied forces brought in more pilots, and even Hurricane fighters for the RAF, but at no time did the defenders have more than about 20% of the air strength opposing them. Uneven as the battle line-up was, the JAAF fighter units just could not break the back of their enemy. As the weeks wore on the 97 *Sen* fighter units were repeatedly thwarted in their attempts to defend their bombers or to make any significant dent in the Commonwealth and American fighter strength. This was at a time when the Japanese were advancing rapidly on every other front. The Japanese fighter pilots soon showed signs of paranoia and began to react violently, while the Allied pilots, in desperate attempts to control the inexorable tide of the Japanese advance, had to measure every move and make every sortie count. In the resulting battles the two enemies grew strangely close to each other, each side gaining a grudging admiration for the other. It was a battle of strength against will.

The Japanese first came over Rangoon on December 23rd 1941. In this engagement the Japanese held the advantage. 97 *Sens* strafed the streets while bombers hit the dock areas. The RAF lost five fighters out of 15, the AVG four out of 12. Japanese losses were four fighters and six bombers. It was the last time the JAAF did so well. The fantastic agility of the Ki.27b had been a surprise; its climb and turning ability made it difficult to pin down, but the Allied pilots did learn that the bouncy 97 *Sen* quickly blew up once it was hit. In later weeks they would get an opportunity to study an example of the "I-97" from the 77th Regiment, captured by the RAF. Dr. Itokawa's light design paid its penalties in strength, torched by the lack of a sealing fuel tank and unpro-

Warmed up, almost ready for take-off. Nakajima Ki.27a in Japan in newly established Air Combat Regiment, late 1938. (M. Toda via Bueschel).





Dedication ceremonies with traditional Japanese wrestlers at the base of a JAAF Fighter Regiment in Japan as Ki.27a fighters, example at right, begin to replace the older Kawasaki Ki.10-II Type 95 Fighters in the background, February 1939. (Asahigraph via Bueschel).

ected by lack of armour. The Allied pilots formulated their approach; avoid a dog-fight, and get any hit you can.' The result was 97 *Sen* slaughter.

Coming over in swarms in their 97 *Sens*, and being met by the few fighters at Mingaladon and its satellite airfields, East met West in a series of brutal combats. In attempts to knock out the Allied airfields and destroy their fighters, the 97 *Sens* took to strafing the Allied fields in one-at-a-time formation. One Ki.27b fighter of the 77th, when hit in a fight above, deliberately dived to his death on a Blenheim on the strip at Mingaladon. The RAF and AVG, in retaliation, hit the JAAF bases in Thailand and ran up their own scores of aircraft destroyed. The fact of fighting over jungles in which probable "kills" would disappear into the trees, and the frenetic pace of combat in the air, kept Allied records lower than the actual count. In spite of this, the record credits the Allied force with the destruction of over 137 Japanese aircraft by the time the RAF and AVG had to evacuate the Rangoon area late in February 1942 as Japanese ground troops advanced. It is estimated that an equal number went unconfirmed.

The initial campaign came to an end when the combined forces of the 1st, 11th, 21st, 64th and 77th Fighter Regiments flying Ki.27b 97 *Sen* and Ki.43-Ic *Hayabusa* fighters moved up to Mingaladon and the surrounding airfields of Rangoon with a force of over 200 fighters. The Allied strength, now concentrated at Magwe, was all but gone. In one massive raid late in March the JAAF literally wiped the Allied forces out, and the Japanese fanned into Burma for most of the duration of the war.

The Ki.27b remained in combat service for some time after the Burma campaign, mostly in China and Manchoukuo, and for Home Defence in Japan; but it was no longer the leading JAAF fighter, as new models were taking over. The last production model was completed at Ota in November 1942, with most of the final examples remaining in Japan for Home Defence or training duties. New unit formation slowed up, although many fighter units had a few Ki.27b fighters or Ki.27b-Kai trainer versions on hand for liaison or supplementary training. When Allied code name identification came into use, the "I-97" of China-Burma-India fame became "Abdul", while "Type 97" fighters met elsewhere, gained the name "Nate". The latter code name was used exclusively later. When the new Combat Training Regiments, Flight Training Companies and Flight Drilling Companies

A mass Aikoku ceremony in the fall of 1939 at which Nakajima Ki.27b Type 97 Fighters and Kawasaki Ki.32a Type 98 Light Bombers purchased with donated funds are being turned over to the JAAF. (Shashin Shuho via Bueschel).



were formed in Japan in 1942 through 1944, the 97 *Sen* was one of the principal aircraft utilized, the examples coming from combat units which had received new equipment. When the Special Attack forces were assembled for the Okinawa campaign in the spring of 1945, the 97 *Sen* and its trainer modifications became one of the most widely used suicide types in JAAF service. Diving to their death in numbers, and destroyed in wholesale lots after Japan's surrender, it is believed that not a single 97 *Sen* fighter survived the Pacific War.

In foreign service

When the "China Incident" began in the late 1930's, the Japanese Army considered the possibilities of training a military force in Manchoukuo. Initial steps were taken to establish an air force in the satellite nation, with obsolete JAAF equipment assigned to the new force. Following the Nomonhan fighting, and in keeping with the JAAF's need to patrol the borders of the Soviet Union, the small Manchoukuoan Air Force was re-organized and the new military arm had its official introduction on April 1st 1940 with the opening of the MAF Air Academy in Mukden. Administrative personnel from JAAF Headquarters managed the MAF, with Lieutenant-Colonel Kasumi Fujii of the JAAF assigned as a staff officer to the MAF at Shinkyō, Manchoukuo, in December 1940, remaining there until the month after Pearl Harbour.

Chosen as standard fighter for the MAF, and introduced on "Aviation Day"—September 20th 1942—the Ki.27b equipped a Fighter Regiment at Mukden, and later equipped a second regiment assigned to air defence of the cities of Harbin and Mukden. They remained the only fighters of the MAF until many of them were taken away by the JAAF in the summer of 1943, ultimately becoming suicide types. Many of the Manchoukuoan pilots were taken straight into the JAAF, and some fought over the Japanese cities against B-29's while their homeland came under attack. By the time of "Aviation Day" in 1944 the MAF no longer existed as a viable force, although there are reports that it participated briefly in the few days of fighting between the Russians and retreating Japanese and Manchoukuoan forces in August 1945.

Plans also existed to create an air force in occupied China, with Wang Ching-Wei's "Reformed Government of China" at Nanking taking part of the responsibility for the military control of the Japanese-satellite nation. After a loan arrangement was worked out between Japan and Wang's government in June 1941, deliveries of some aircraft began. Ki.27b fighters were scheduled but never delivered, as distrust of the effectiveness of the Chinese forces led to the alteration of the JAAF's original plans.

"Nate" as a trainer

An airframe as basic as the 97 *Sen* suggested that modification could improve its characteristics. As a result, the Ki.27 had its share of *Kaizo*, or "modified", improvements. At the time the Ki.43 fighter was experiencing teething difficulties, two prototypes of a lightweight Ki.27 with a retractable landing gear were completed in July and August 1940 as the Ki.27-Kai. Faster than the standard Ki.27b, it still did not equal the opportunities offered by the newer Ki.43 and the project was dropped. One of the troubling facts was that the unsealed fuel tank was right behind the pilot. The Nomonhan experience suggested that this was not such a good idea.

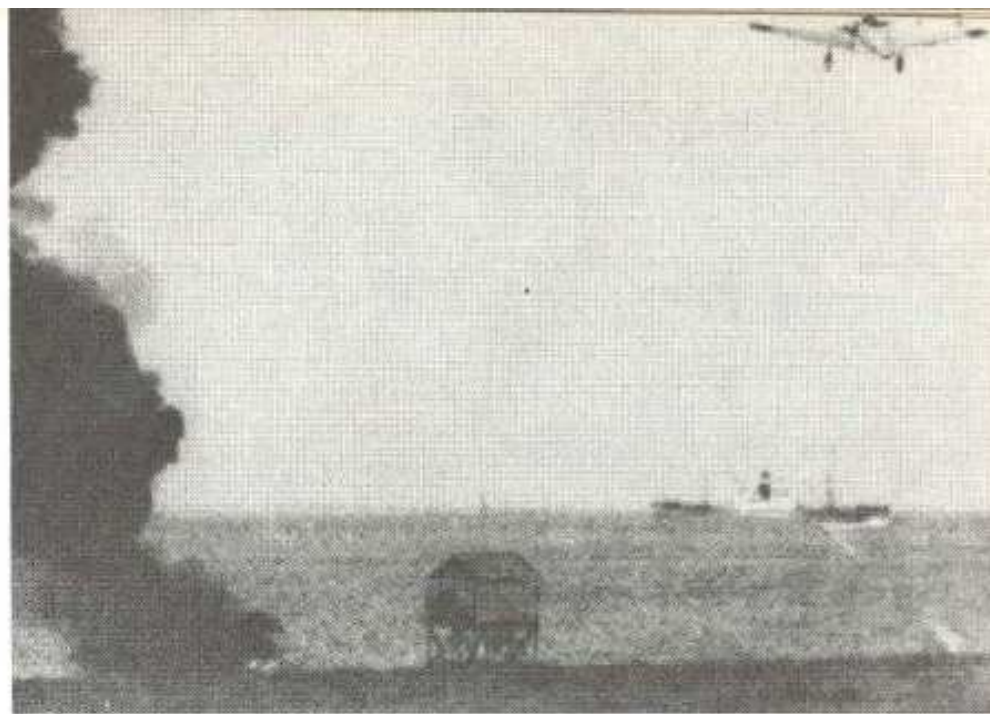
The largest use of modified 97 *Sen* aircraft was as trainers. The Ki.27a-Kai and Ki.27b-Kai models set the pattern for the major 97-Kai-Fukuzaki modification in which a second seat was added to the standard Ki.27b for use as an advanced trainer. The success of this modification led to the engineering of a trainer version to be produced by Manshu as the Ki.79. Developed as a companion trainer to the Tachikawa Ki.55, then in use as the 99 *Koren*, the Ki.79 was accepted for production on January 19th 1943, and retroactively designated as the 2 *Koren*, or Type 2 Advance Trainer. Two models entered produc-



tion in Manchoukuo, with the Model A single-seater and Model B two-seater being produced as the Ki.79a and Ki.79b respectively. By 1943 they were becoming available in quantity, with both models equipping the *Sendai* and *Tachiarai* Army Flying Schools and the *Tokorozawa* Army Aviation Maintenance School. The Ki.79b model was supplied to the Army Air Academy as well as the *Tokyo*, *Otsu* and *Oita* Army Boys Flying Schools, set up for high school students to interest them in becoming pilots for the JAAF. Most of them later became suicide pilots, flying the same 2 *Koren* aircraft on *Kamikaze* missions.

When the training efforts expanded early in 1944 with the establishment of the numerous Flight Training Companies, the two 2 *Koren* models became original equipment. The shortages of aviation dural, and the need to preserve this valuable raw material for combat aircraft, led to the development of the Ki.79b and Ki.79c models which utilized steel airframes covered with wooden ply skins. These newer models were just entering production at Mukden when the war came to an end, with many of them on airfields at Mukden at the time of the surrender. While the Americans destroyed similar aircraft when they found them in Japan, the Russians left them on the airfields in occupied Manchuria, where they were soon picked up by the Chinese communists and taken over as trainers for the Red Army Air Force. Hiring mercenary Japanese and Manchurian pilots as instructors, the Chinese opened training schools on the Manchurian airfields and for the first time began the systematic training of pilots for a formalized air force. When the Peoples Liberation Army was officially formed in July 1946 the 2 *Koren* trainers became the first standard trainers of the PLAAF, the air force of the communist army. They remained in active service well into the Korean War period, with many stationed at the Chinese PLAAF Air Academy at Sian.

Other Ki.79a and Ki.79b trainers that had been sent to Singapore, Java, the lower Philippines and elsewhere in the Japanese occupied zones for additional training of green pilots were either destroyed or fell into local hands after the war ended. In Java and Sumatra local Indonesian forces took over the Japanese arms in their areas and offered select Japanese pilots the opportunity to help train insurgents in the use of Japanese fighters and bombers then being rebuilt from wrecks. The first aircraft to fly in Indonesian service was a Ki.79b at Djakarta, which was given the name *Nishikoren*, or "First Trainer". A number ultimately entered Indonesian service as the first trainer of this air arm.



Above: On target with an attack by the Ki.27b Fighter, October 1939. (Asahigraph via Bueschel).

Left: Part of the Patriotism ceremonies was a simulated display of combat operations. This Type 97 has just bombed and strafed a dummy target. (Shashin Shuho via Bueschel).

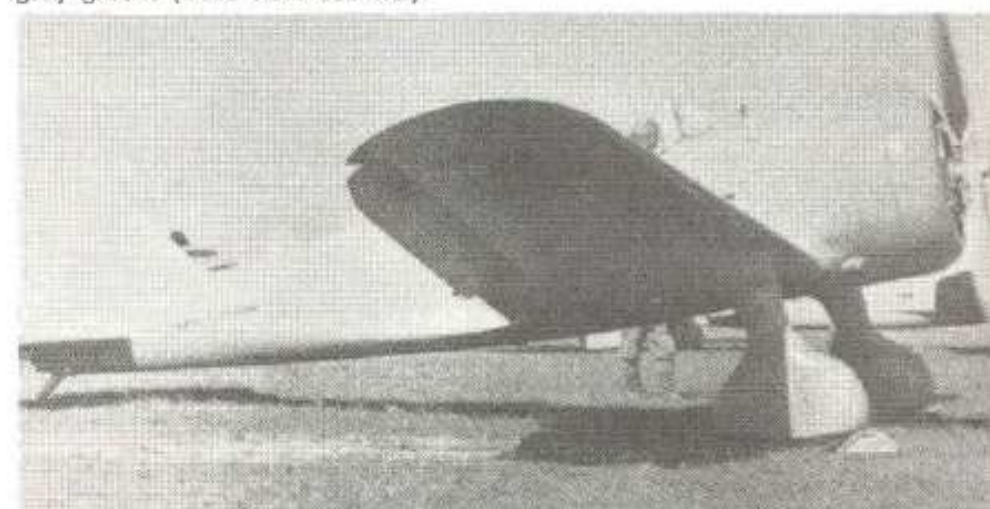


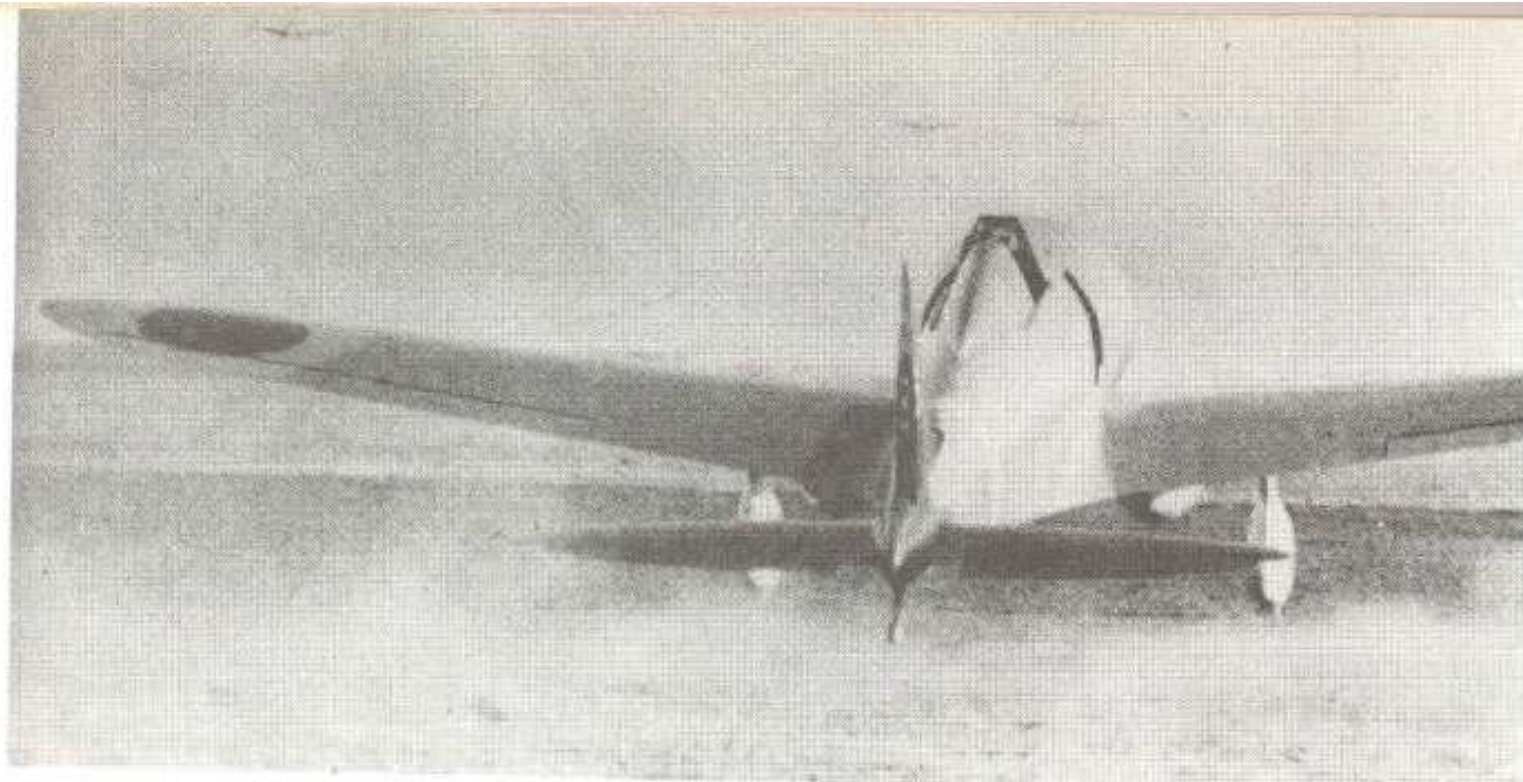
Above: Typical Aikoku "Patriotism" card illustration of the Type 97 Fighter passed out at Aikoku ceremonies. The inscriptions on the fuselage side were changed by retouching for each presentation, or kept purposefully confused as shown here. (M. Toda via Bueschel).



Above: Close-up of Ki.27b at Aikoku ceremonies shows cockpit details and the quantity of aircraft turned over to the JAAF in a single event. (R. M. Bueschel).

Below: Aikoku inscriptions were carried in a single horizontal line of characters forward of the stabilizer. Army finish prior to assignment is grey-green. (Sora via Bueschel).





Above: Assigned to Manchoukuo to counter growing Soviet pressure on the borders, a Ki.27a of the 10th Independent Fighter Company takes off on a patrol early in December, 1938. (Asahigraph via Bueschel).

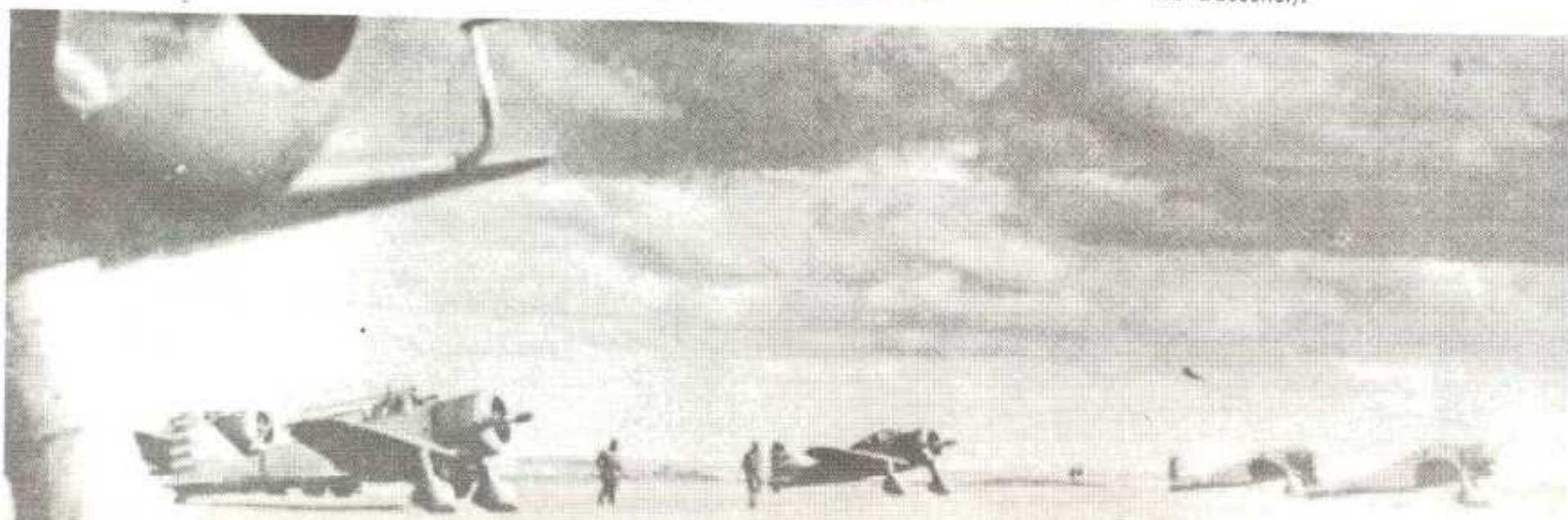


Right: Guarding the border. A Japanese guard watches over a Type 97 Fighter in the battle zone as the border fighting between Outer Mongolia and Manchoukuo begins, summer 1939. Dual threats brought the Soviets and Japanese into the battle against each other. (Asahigraph via Bueschel).

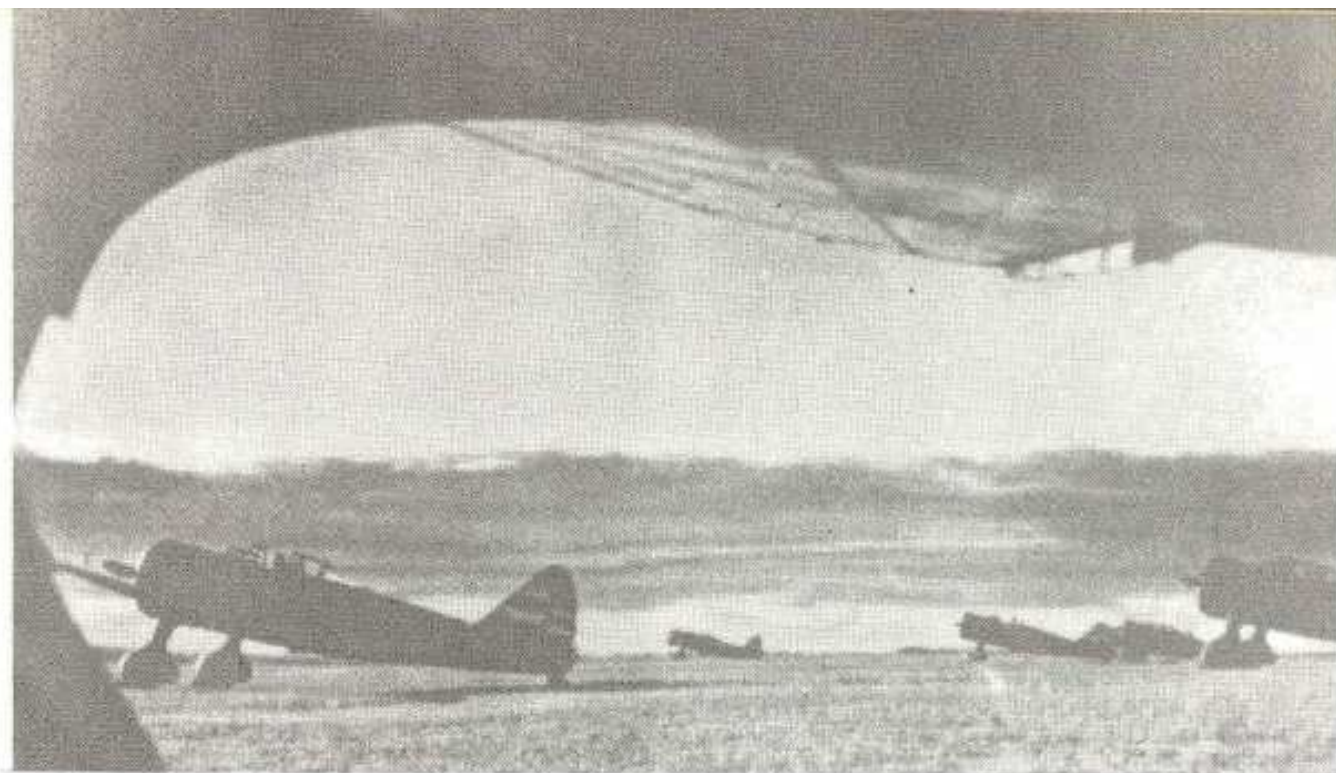


Left: One of the few good photographs of the Type 97 Fighter available in the West prior to the Pacific War shows a Ki.27a model of the 1st Company, 24th Regiment in Manchoukuo during the Nomonhan fighting in 1939. (Domei Press via Bueschel).

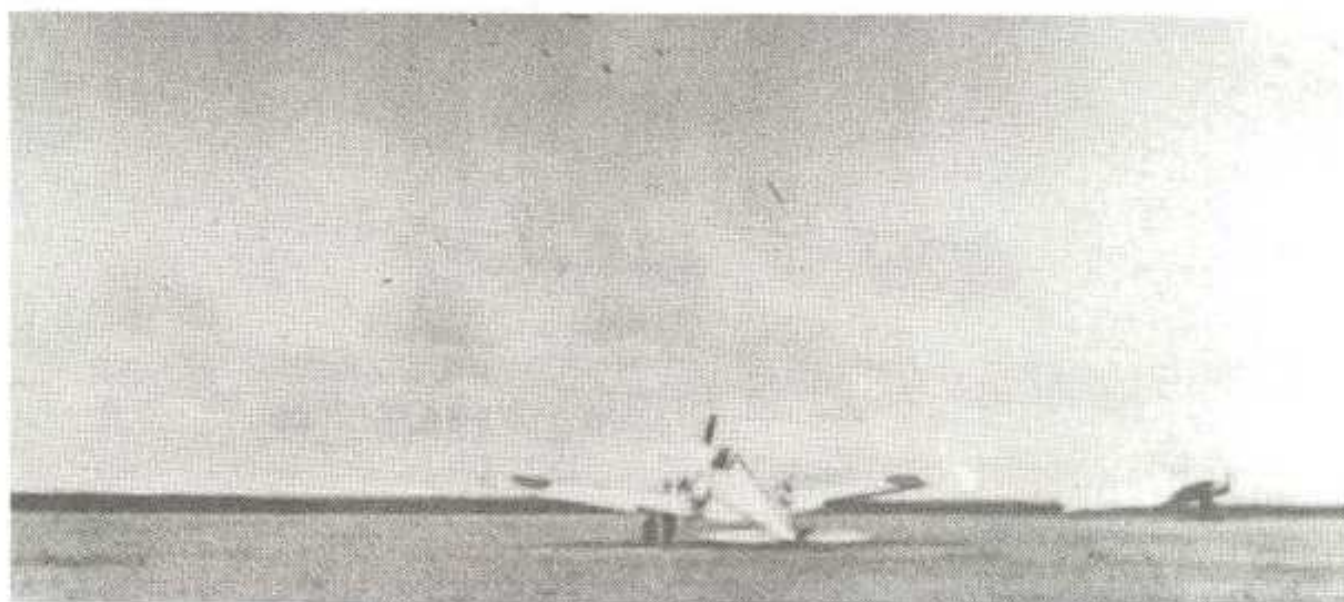
Below: Aircraft of the 1st Company, 24th Regiment line up ready for take-off at an airfield somewhere in western Manchoukuo during the "Nomonhan Incident", fall 1939. (Sekai-no-Kokuki via Bueschel).



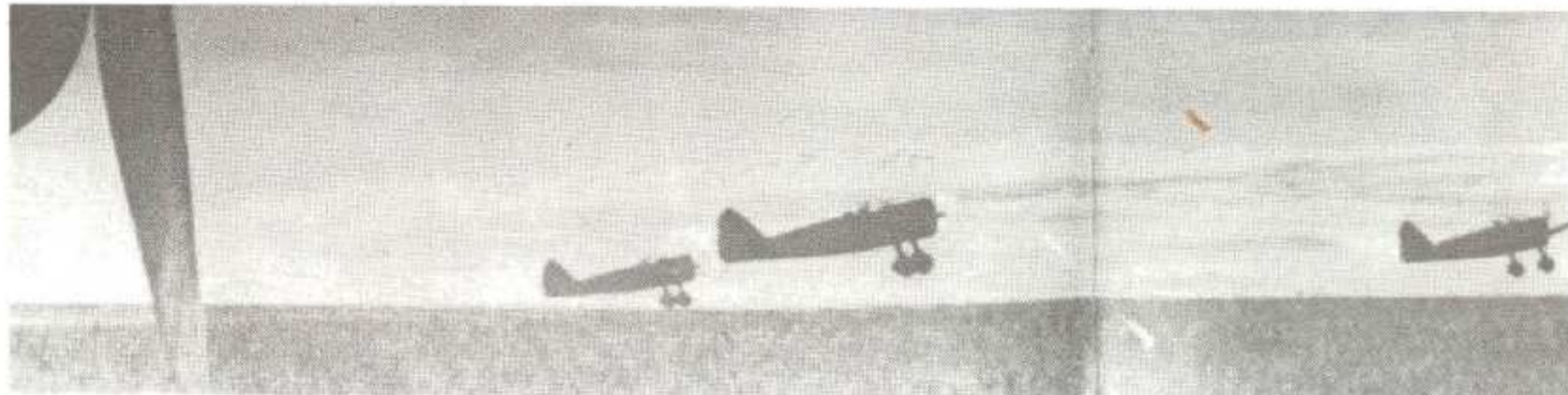
Right: The 24th Regiment on station in Manchoukuo, July 1939. These fighters are of the 1st Company with striped regimental markings in white. (Shashin Shuho via Bueschel).



Below: Ki-27a fighter of the 2nd Company, 24th Regiment in Manchoukuo, early July 1939. This unit saw much combat against Soviet and Mongolian fighters. (Shashin Shuho via Bueschel).

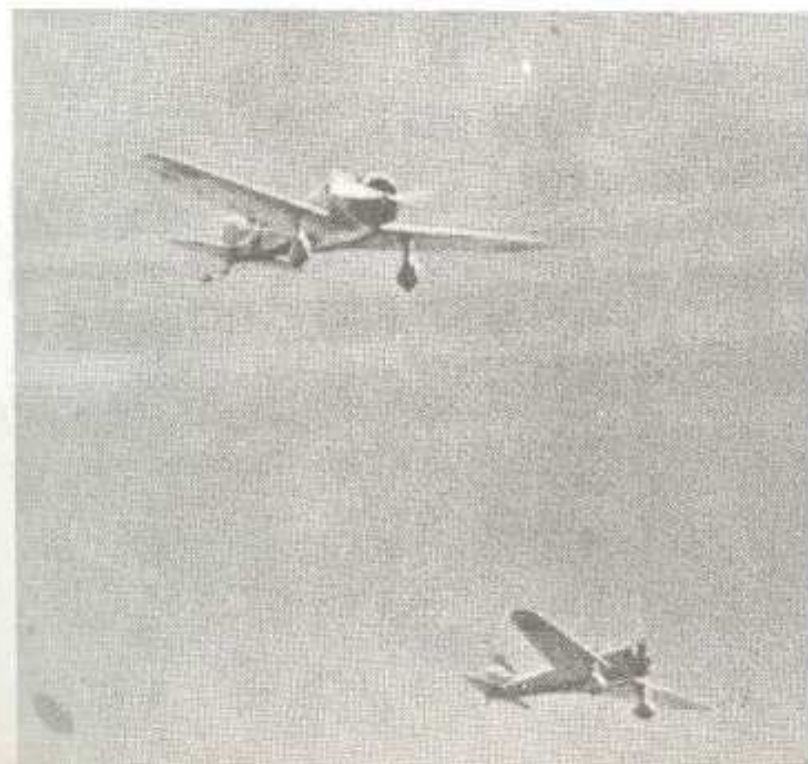


Below: Dawn Patrol at Nomonhan, August 1939. Aircraft are from the 11th Regiment. (Asahigraph via Bueschel).



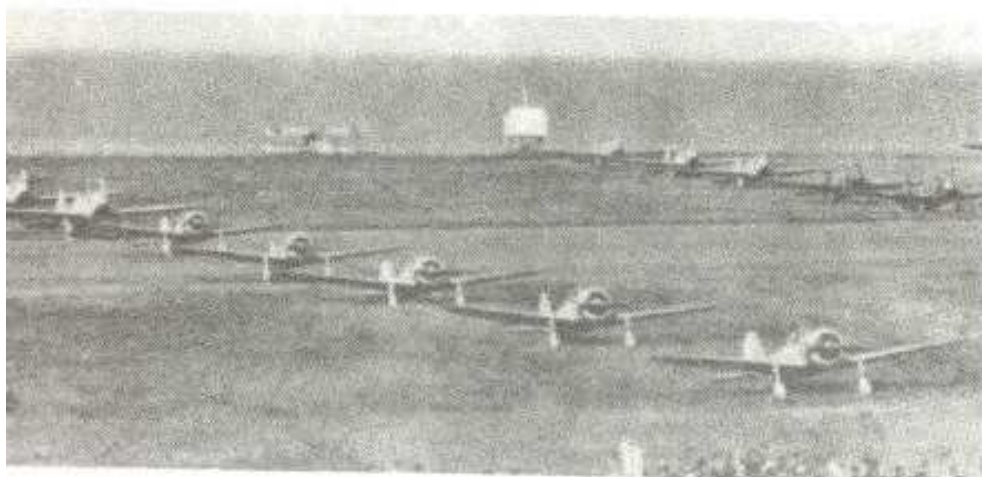
Below, left: Two Ki-27a fighters of the 1st Company, 11th Regiment, go into combat in late July 1939. Top left Ki-27a may be Captain Shimada's who became an "Ace" in one sortie near Harbin. (Asahigraph via Bueschel).

Below, right: Combat on the borders! A Type 97 Fighter of the 11th Regiment returns at dusk from a mission over Nomonhan in July 1939. (Asahigraph via Bueschel).

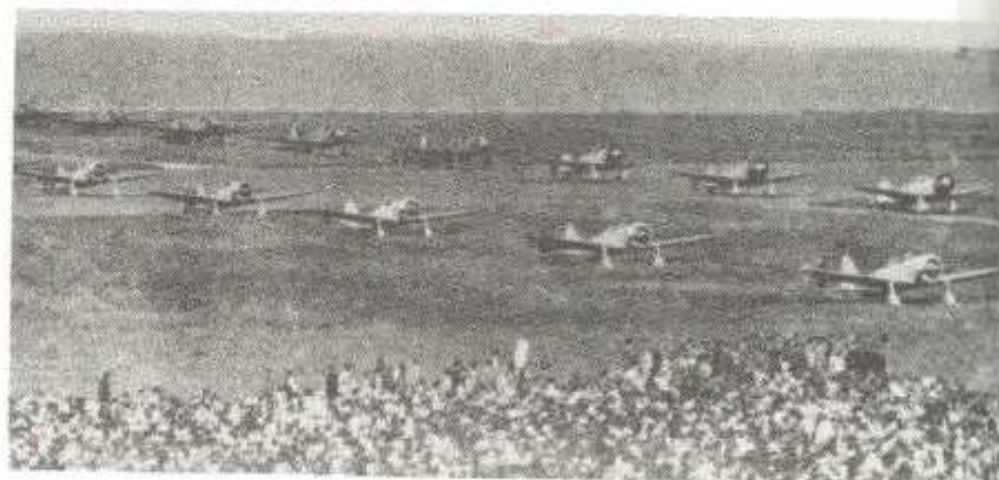




Left: A victory at Nomonhan! The wing of a Soviet Polikarpov I-16 Fighter shot down by a Ki.27a of the 24th Regiment is displayed at the JAAF airfield in middle July 1939. (Shashin Shuho via Bueschel).



Above: The Ki.27b enters service in quantity. Panoramic view shows a line of Ki.27b Fighters and Ki.32 Light Bombers at a mass Aikoku dedication ceremony in October 1939. (Asahigraph via Bueschel).

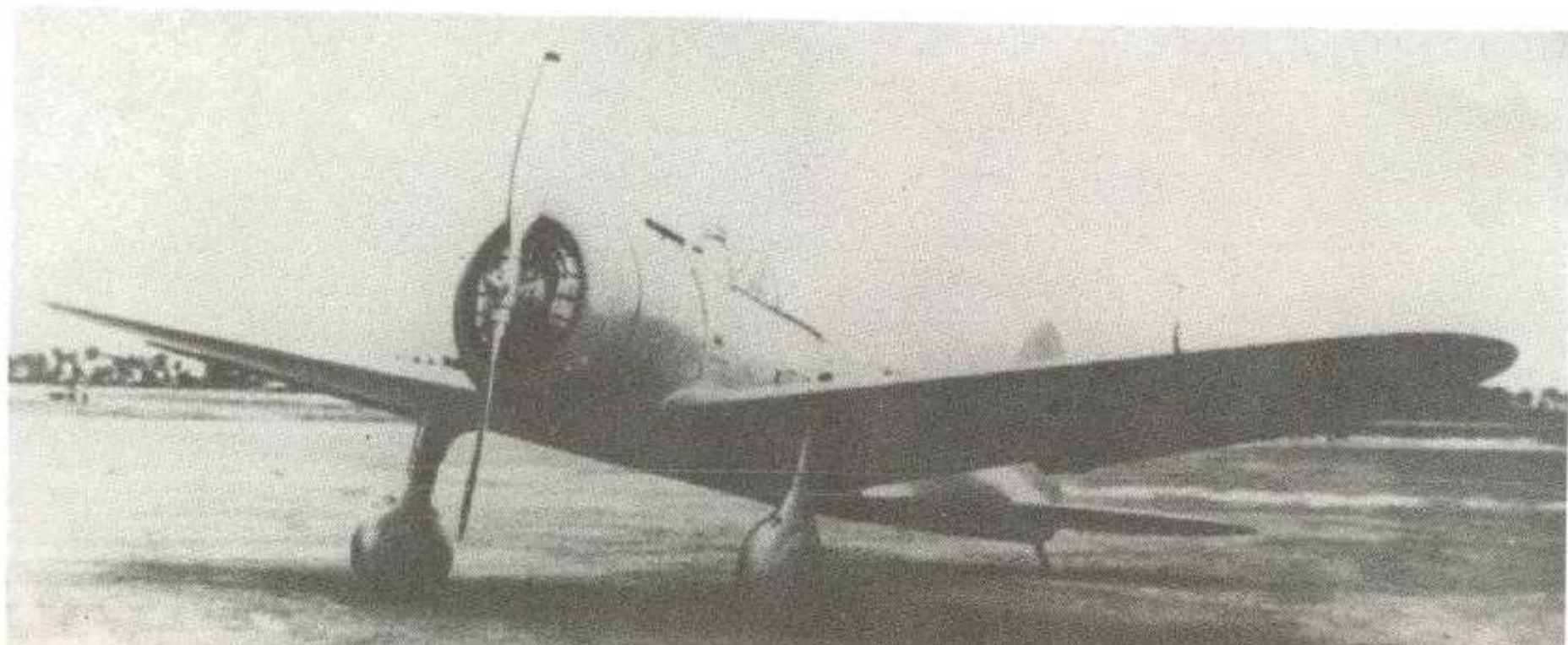


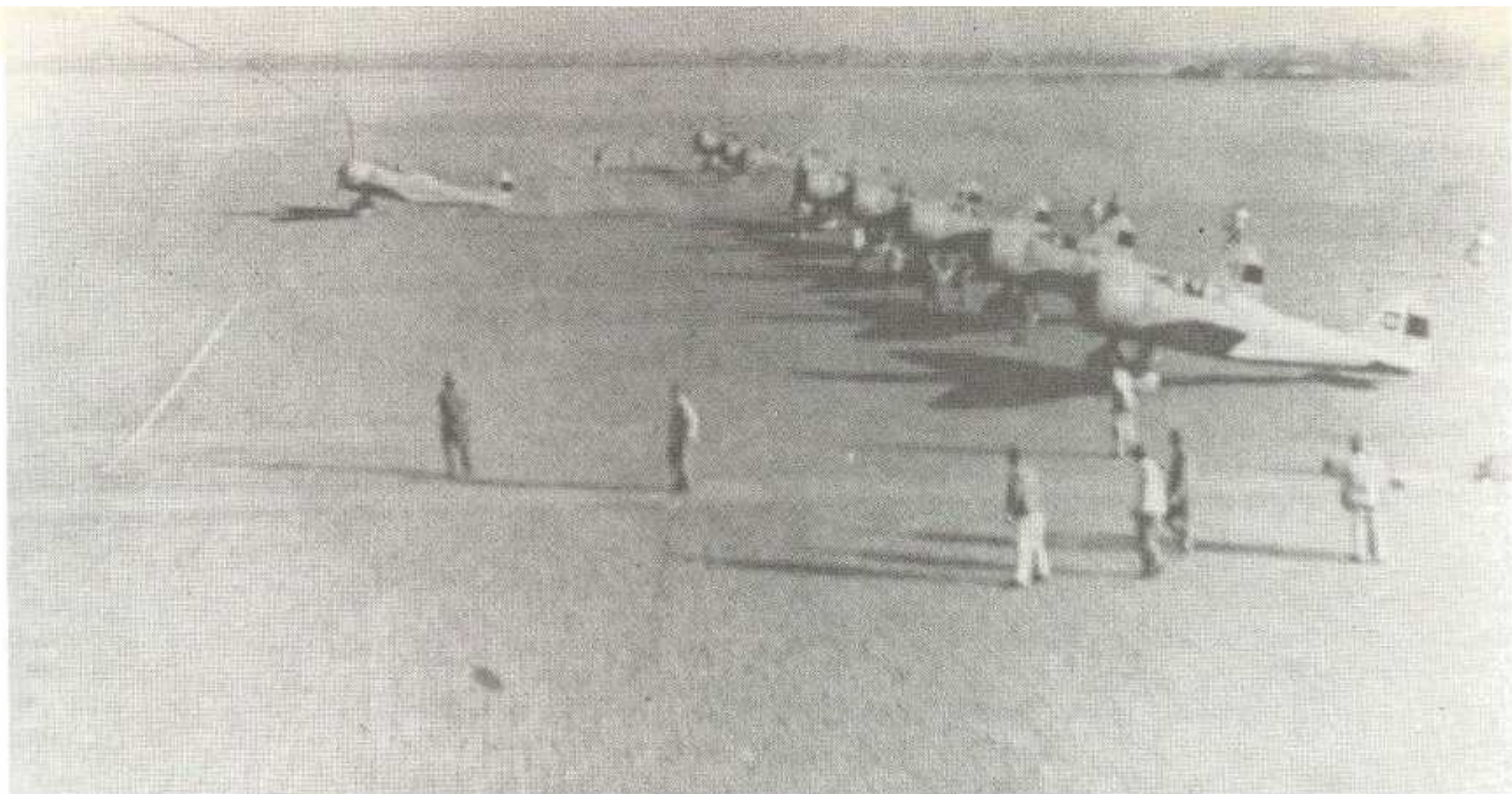
Above: Continuation of panoramic view to the right shows Ki.27b Fighters, Ki.32 Light Bombers and Ki.15 Command Reconnaissance aircraft. (Asahigraph via Bueschel).



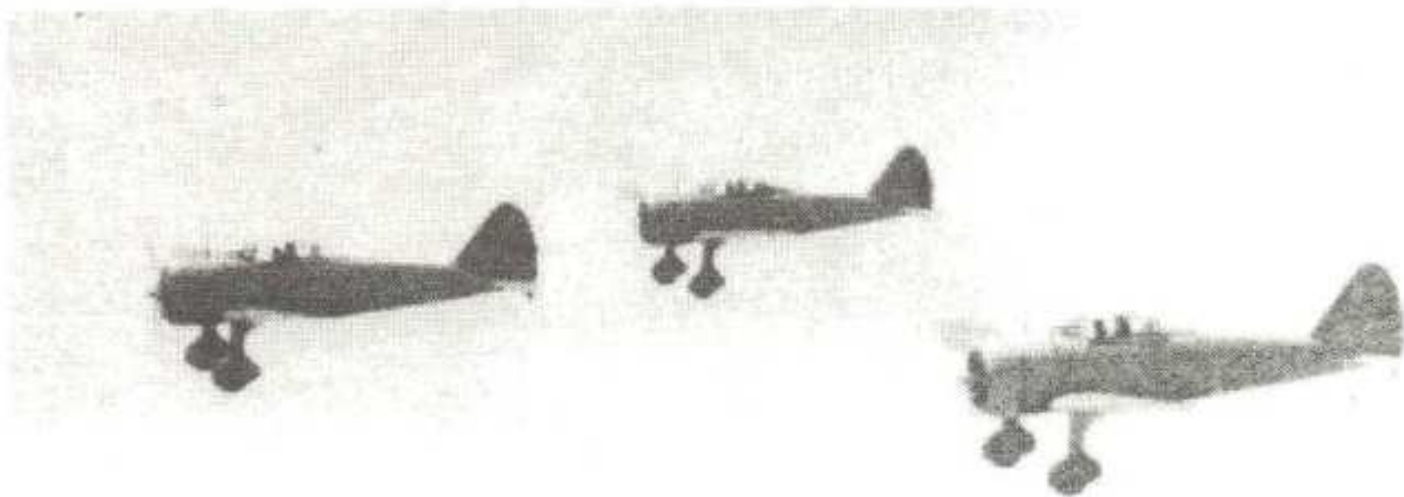
Left: Classic view of Ki.27a fighter. Markings suggest this aircraft had been relegated to training duties (H. Ando via Bueschel).

Below: Similar view of the later Ki.27b model shows similarities, and changes in cockpit area. (R. Mikesh via Bueschel).



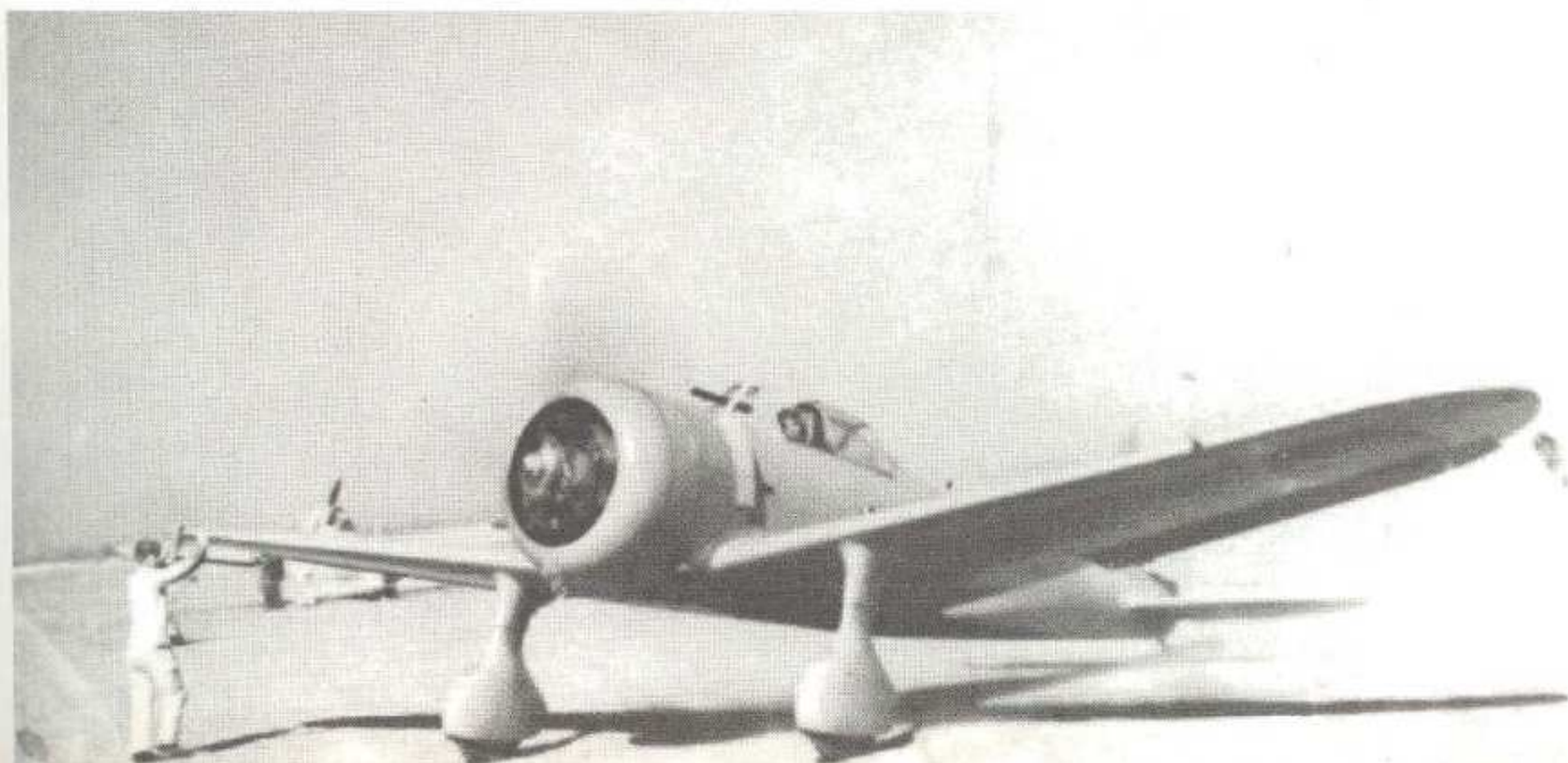


Above: Whole units were trained en-masse to meet the demands of the northern borders. Here a regimental company is trained as a group. Time is approximately middle 1940, and the aircraft is the Ki.27a. (M. Toda via Bueschel).



Above: In 1939 and 1940 steady deliveries of the Type 97 Fighter replaced the earlier Type 95 Fighters in JAAF combat unit assignments. (Koku Asahi via Bueschel).

Below: The beauty of the Ki.27b Type 97 Fighter. Simple lines, classic configuration with fixed landing gear, and unencumbered wing surfaces. Many veteran JAAF pilots favoured the Type 97 and its manoeuvrability long after its newer replacements were in service. (M. Toda via Bueschel).

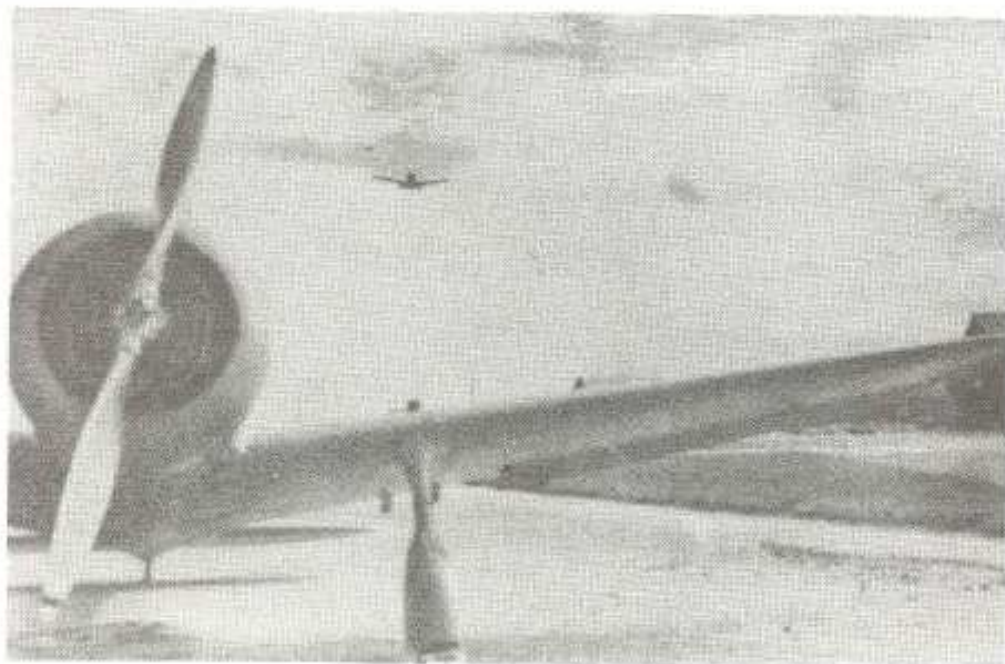




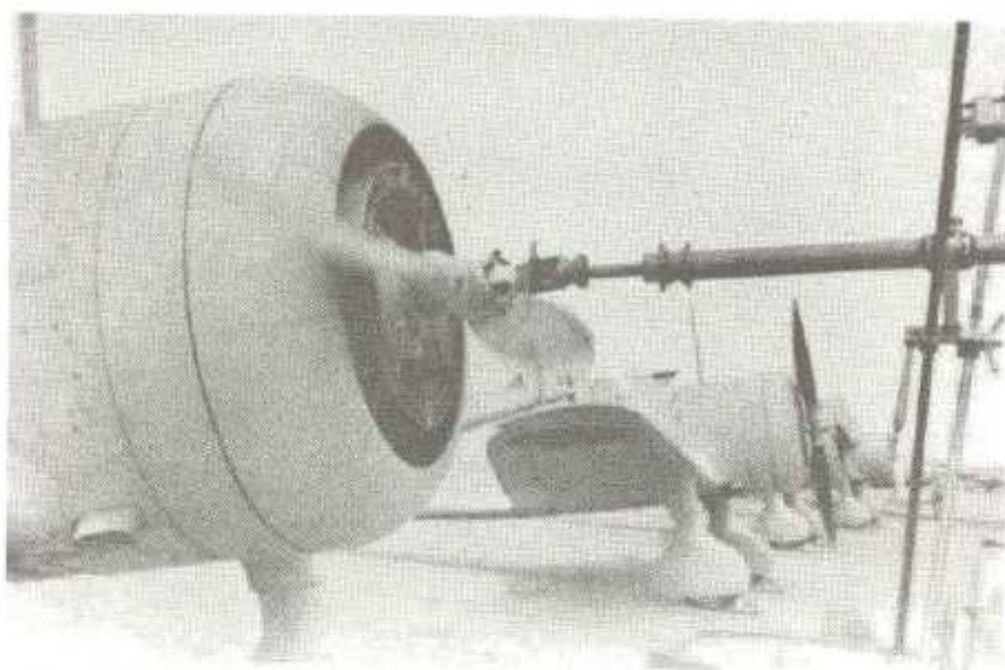
Above: Type 97's on duty at a fighter airfield in Manchoukuo, September 1940. (Koku Asahi via Bueschel).



Above: The Anti-Soviet Patrol established in 1940 guarded the northern borders against the Russians, yet tied up JAAF fighter units for years. (Asahigraph via Bueschel).



Above: The simple and honest lines of the Nakajima Type 97 Fighter. Japanese documents simply called it the 97 Sen, or "97 Fighter". (Koku Asahi via Bueschel).



Above: Starting! (Sora via Bueschel).

Right: Return from a patrol mission over Manchoukuo, November 1940. (Koku Asahi via Bueschel).

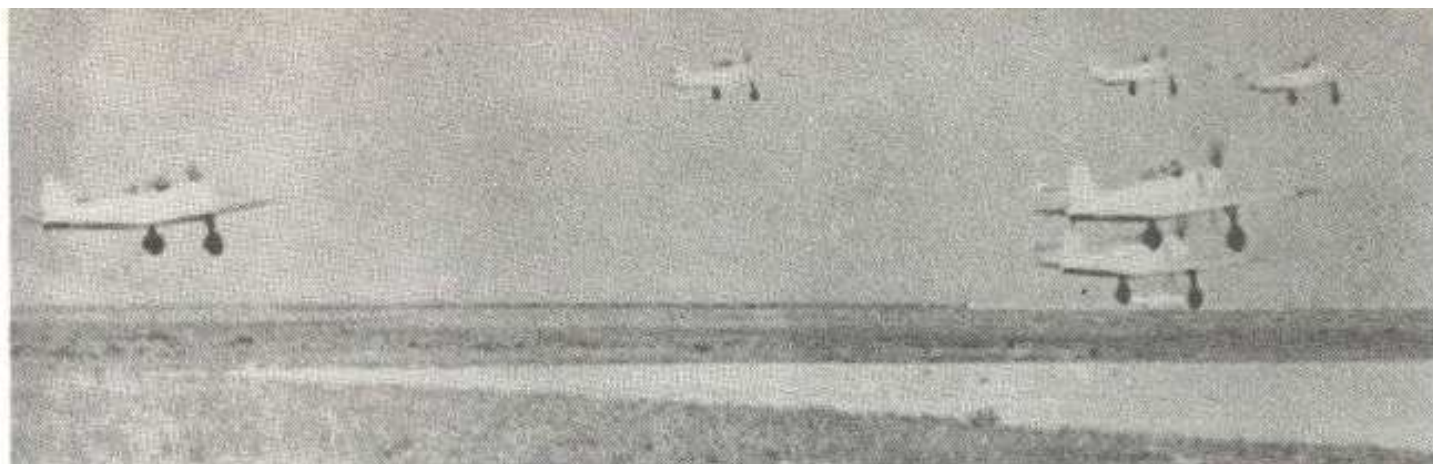


Below: Arming! (Koku Asahi via Bueschel).

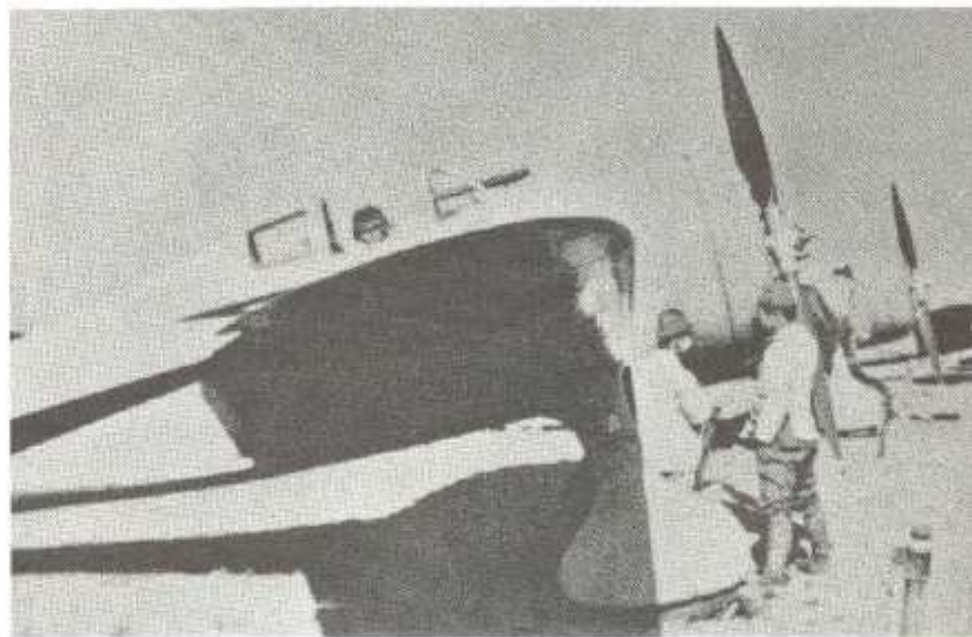
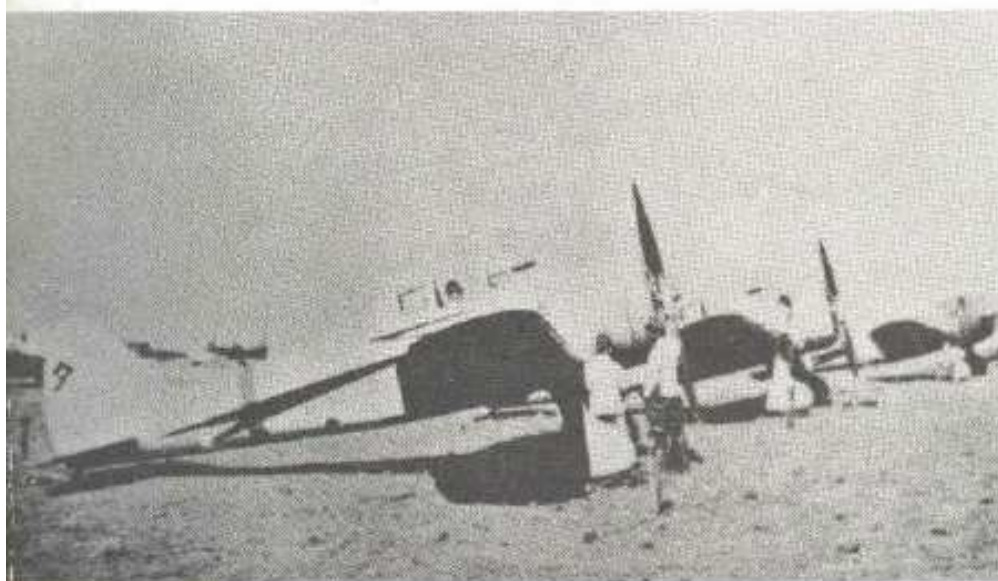


Below: Calibrated firing! (Koku Asahi via Bueschel).





Above: A Company of Home Defence Type 97 Fighters takes off from an air base in Japan, December 1940. (Sora via Bueschel).



Above, left: Some of the last Ki-27a examples in first-line service remained with the 59th Regiment in China. This aircraft is flown by a Squad Leader of the 2nd Company in China, December 1940. (Sora via Bueschel).

Above, right: The 59th was moved into China after the "Nomonhan Incident" and following the signing of the non-aggression treaty with the Soviet Union. (Sora via Bueschel).

Above: As the JAAF's leading fighter in the late 1930's, the Type 97 was an inspiration to the model builders that later became the young and largely untrained *kamikaze* suicide pilots at the closing months of the Pacific War. (Koku Shonen via Bueschel).

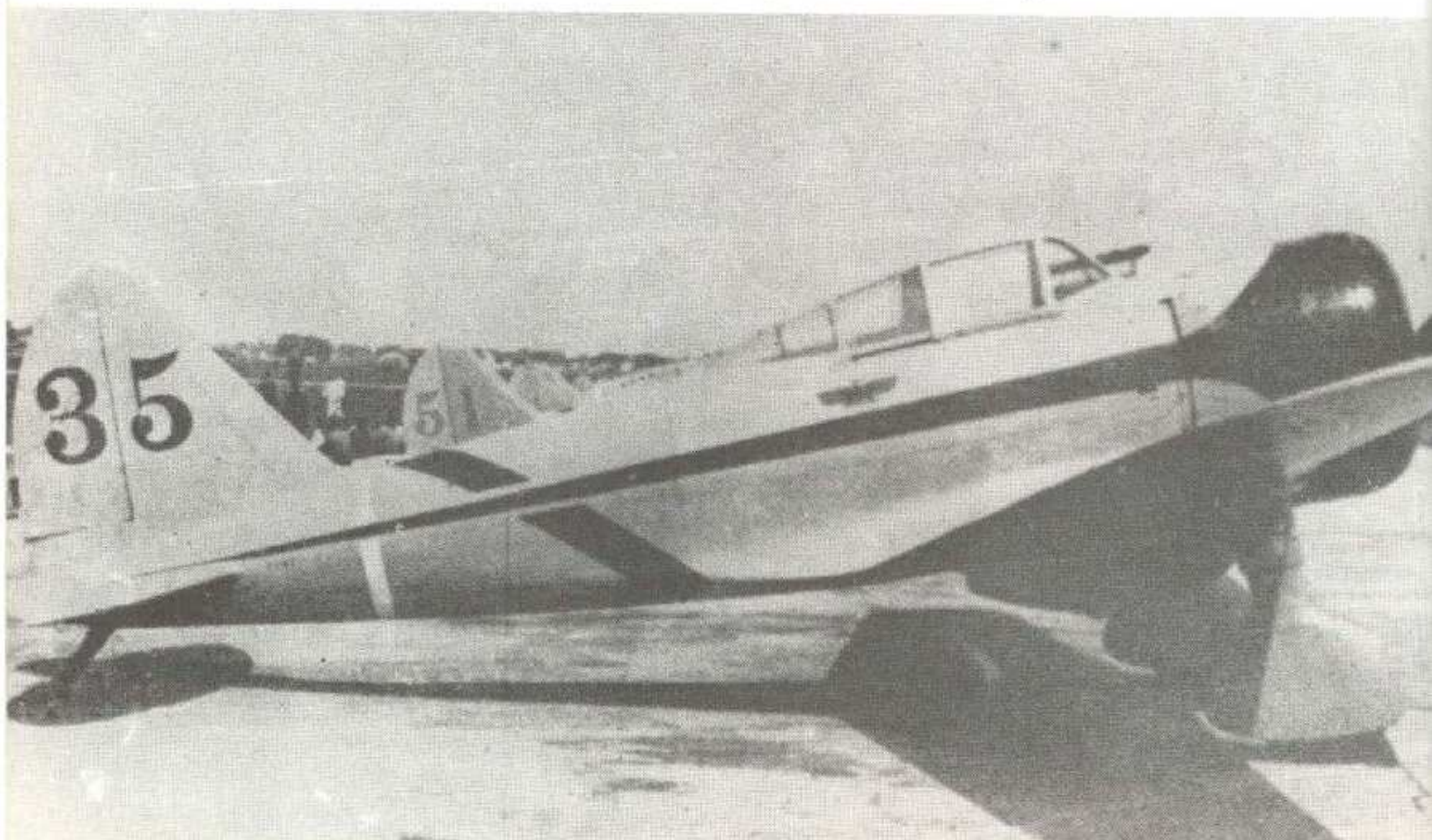
Right: Work in progress on Ki-27b fighters of the 2nd Squad, 84th Independent Fighter Company in French Indo-China in 1941. Squad commander's aircraft had "Eagle Wings" on landing gear parts. (Koku Jidai via Bueschel).

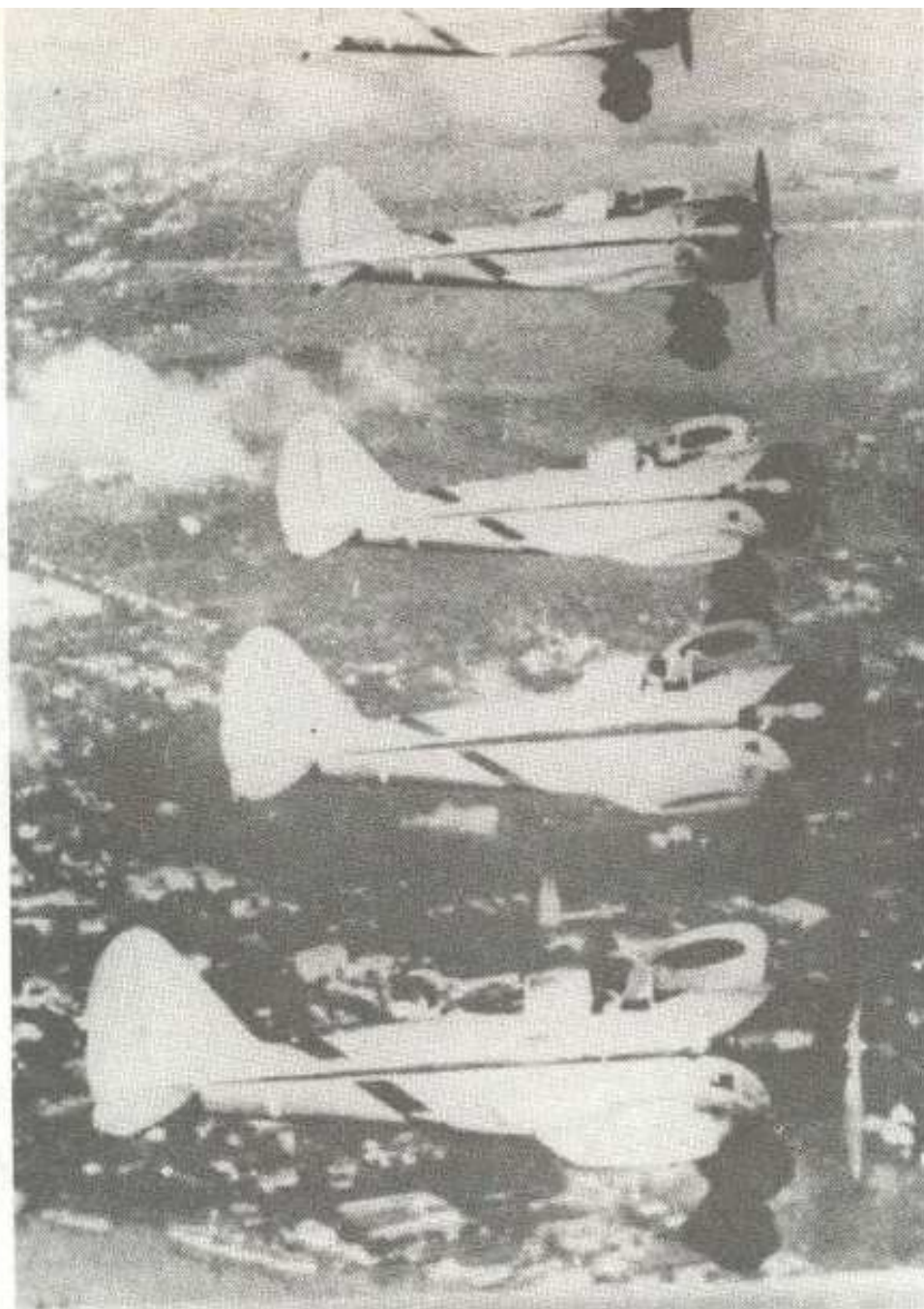




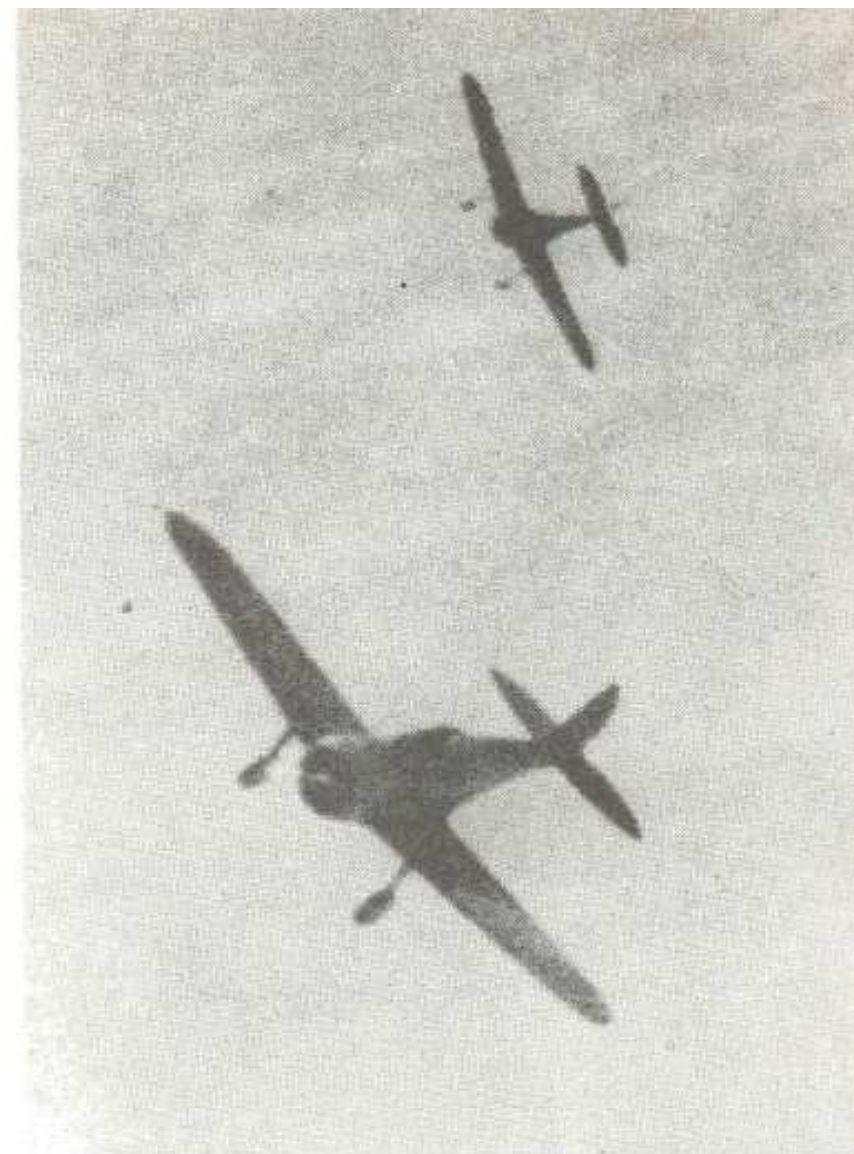
Above: The 1st Squad, 84th Independent Fighter Company, flying over South China in February 1941. (Koku Asahi via Bueschel).

Below: The 84th Independent Fighter Company, known as the "Nagamo Company", was formed out of the 3rd Company of the 64th Regiment early in 1941. It flew its Ki-27b aircraft until disbanded in August 1943. (Sekai-no-Kokuki via Bueschel).



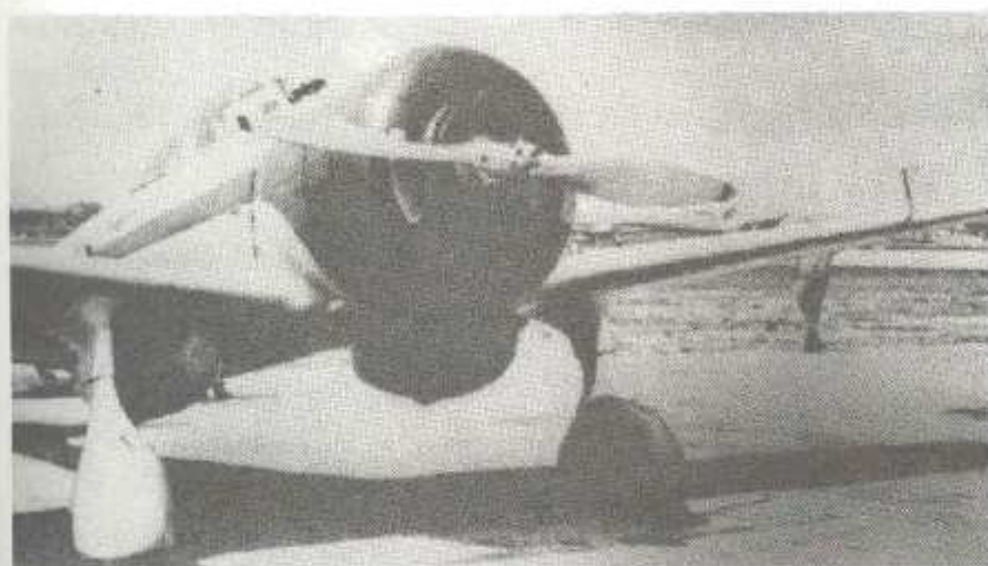


Above: 2nd Squad of the 84th Independent Fighter Company over French Indo-China, middle 1941. (M. B. Passingham via Bueschel).



Above: A "Classic" monoplane fighter in the air. (Koku Asahi via Bueschel).

Below: Ki.27b of the 84th Independent Fighter Company flying over South China early in 1941. This was one of the few reasonable photographs of the Type 97 Fighter to show up in Allied recognition manuals early in the Pacific War. (USAAF photo via Bueschel).



Above: One of the flashy Ki.27b fighters of the 84th Independent Fighter Company in 1941. This unit took part in the summer 1941 occupation of French Indo-China. (Sekai-no-Kokuki via Bueschel).



Below: A broken landing gear leg was an uncommon occurrence with the Type 97 Fighter as this aircraft was well designed and durable. (Sekai-no-Kokuki via Bueschel).

Below: An accident with aircraft No. 23, 2nd Squad, 84th Independent Fighter Company. (Sekai-no-Kokuki via Bueschel).





Above: When the 64th Regiment opened the Pacific War in Malaya in December 1941 it had both Ki.27b Type 97 (background left) and Ki.43 Hayabusa fighters (left). Its commander, Major Tateo Kato, flew a Hayabusa. (Koku Asahi via Bueschel).

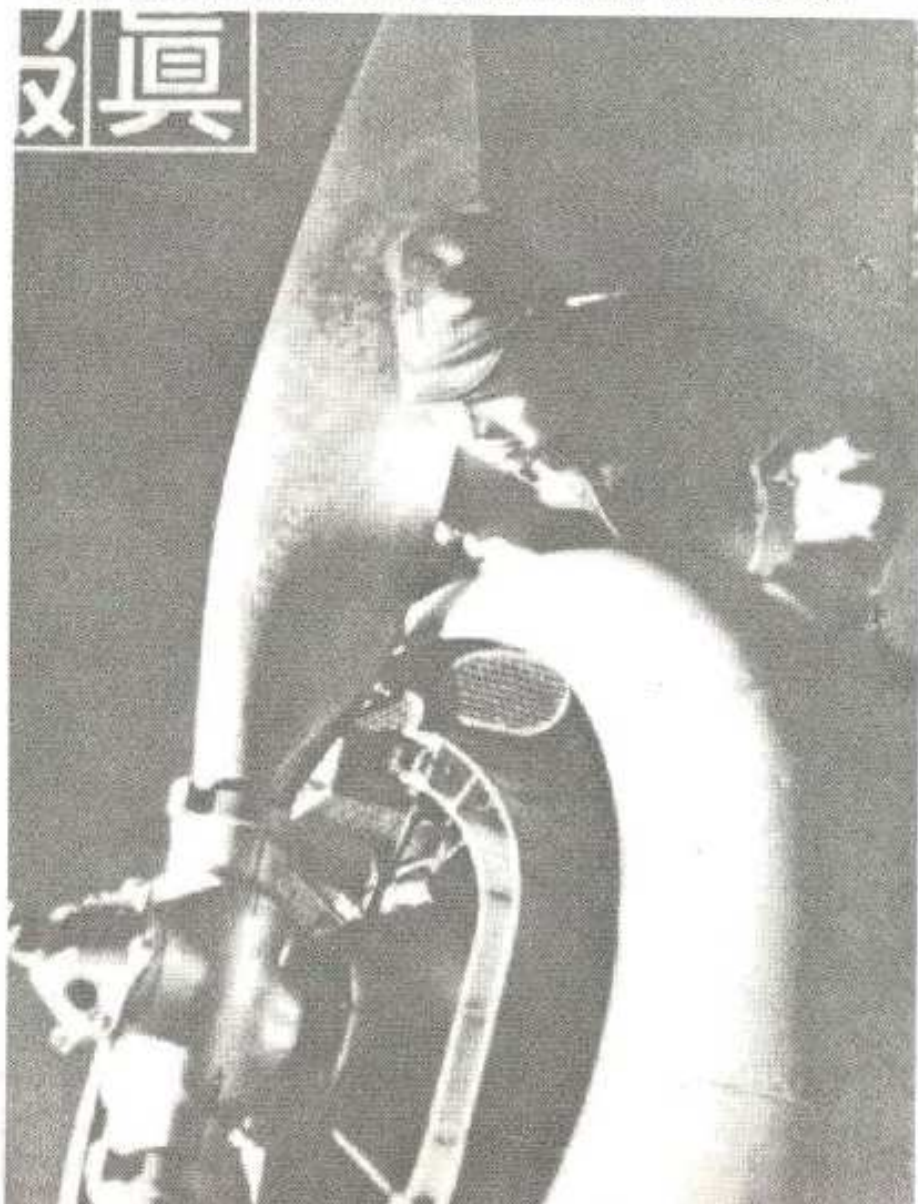


Above: One of the first "kills" of the Pacific War shows a "Nate" shooting down an RAF Buffalo over Malaya. (Asahigraph via Bueschel).

Left: This Ki.27b "Nate" of the 1st Company, 1st Regiment is shown at Hong Kong in February 1942. Burned out remains of a Chinese civil Junkers Ju. 52/3M are in the foreground. (Asahi Press via Bueschel).

Below, left: Non-Com pilot Corporal Susuru Koyama of the 246th Regiment is shown before his 3rd Company Ki.27b aircraft early in 1943. This unit used the Type 97 Fighter until June the same year. (S. Koyama via Bueschel).

Below, right: The distinctive flattened-circle grill work in the nose of the Type 97 Fighter is shown in this night photograph taken at a JAAF fighter base in January 1941. (Shashin Shuhu via Bueschel).



Right: The 47th Regiment used a number of non-combatant Ki.27b-Kai fighters for liaison and base communications in 1944. Home Defence "white bandage" markings are on the wings and fuselage. (Mannosuke Toda via Bueschel).



Left: Carelessness, and the loss of two aircraft by the 47th Regiment at Chofu in 1944. Aircraft at left is a Ki.27b-Kai while that at the right is a Nakajima Ki.44-IIb Type 2 Fighter Shoki, coded "Tojo", used by the unit in Tokyo Air Defence. (Mannosuke Toda via Bueschel).

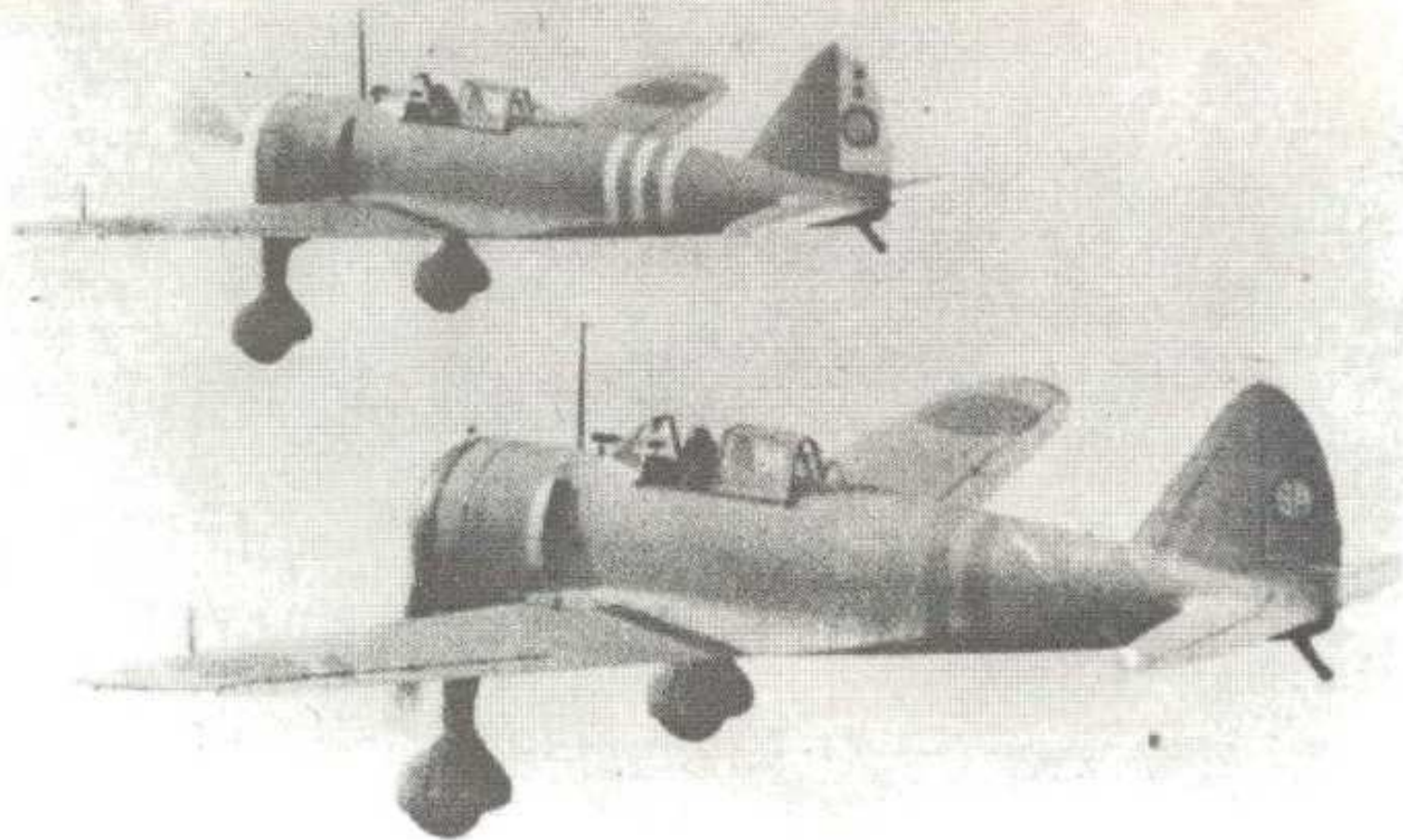
Right: The wrecked "Nate" and "Tojo" are both from the 2nd Company of the 47th Regiment. Company markings on the vertical tail are in red. The Ki.27b-Kai crashed into Ki.44-IIb. (Mannosuke Toda via Bueschel).



Left: The Type 97 Fighter (background) in training in companion with the Tachikawa Ki.9-Kai Type 95-1 Intermediate Trainer "Spruce" (foreground) at a JAAF training site. (Koko Jidai via Bueschel).

Below: Ki.27b Fighters at Akeno showing a line-up of at least a dozen. (H. Ando via Bueschel).





Above: Training "Nates" of the Akeno Army Flying School, in close formation. (R. M. Bueschel).



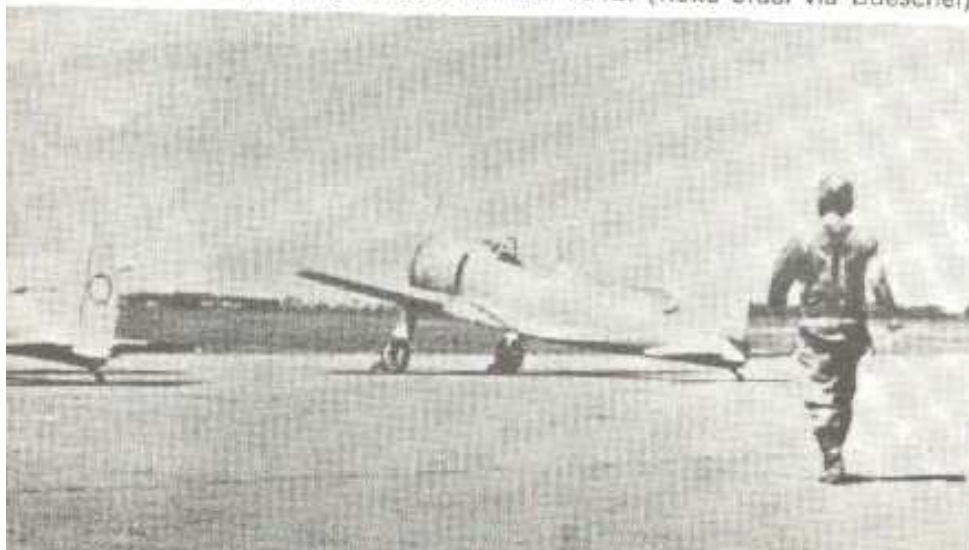
Above: Late Ki.27b examples were assigned to the Army Aviation Maintenance School at Tokorozawa as soon as they were available for maintenance training. These examples, with wheel spats removed, are at Tokorozawa in March 1941. (Koku Asahi via Bueschel).



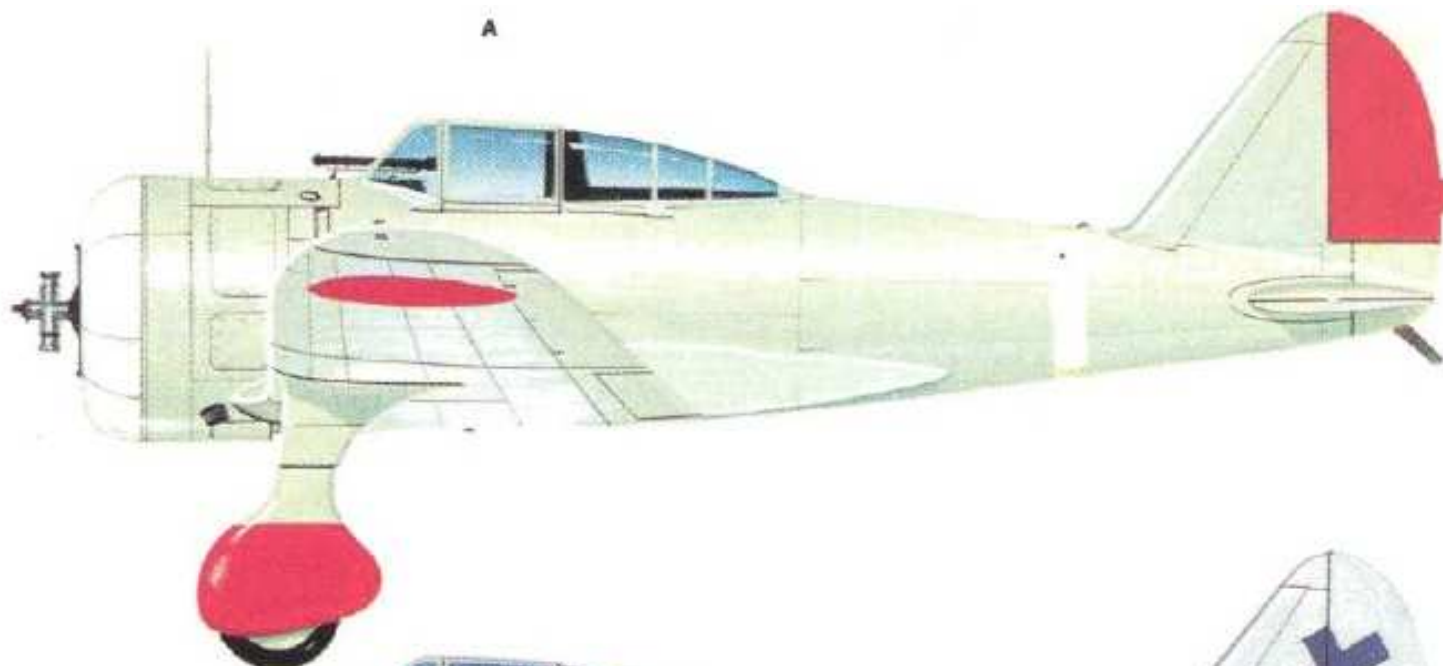
Above: A student pilot enters his Ki.27b-Kai trainer at Akeno in the summer of 1942. (Sora via Bueschel).

Below, right: Markings of the Akeno Army Flying School, circa summer 1942, are in red and white. Individual Kana numbers, such as 58 as shown, were in black. (Hiko Nippon via Bueschel).

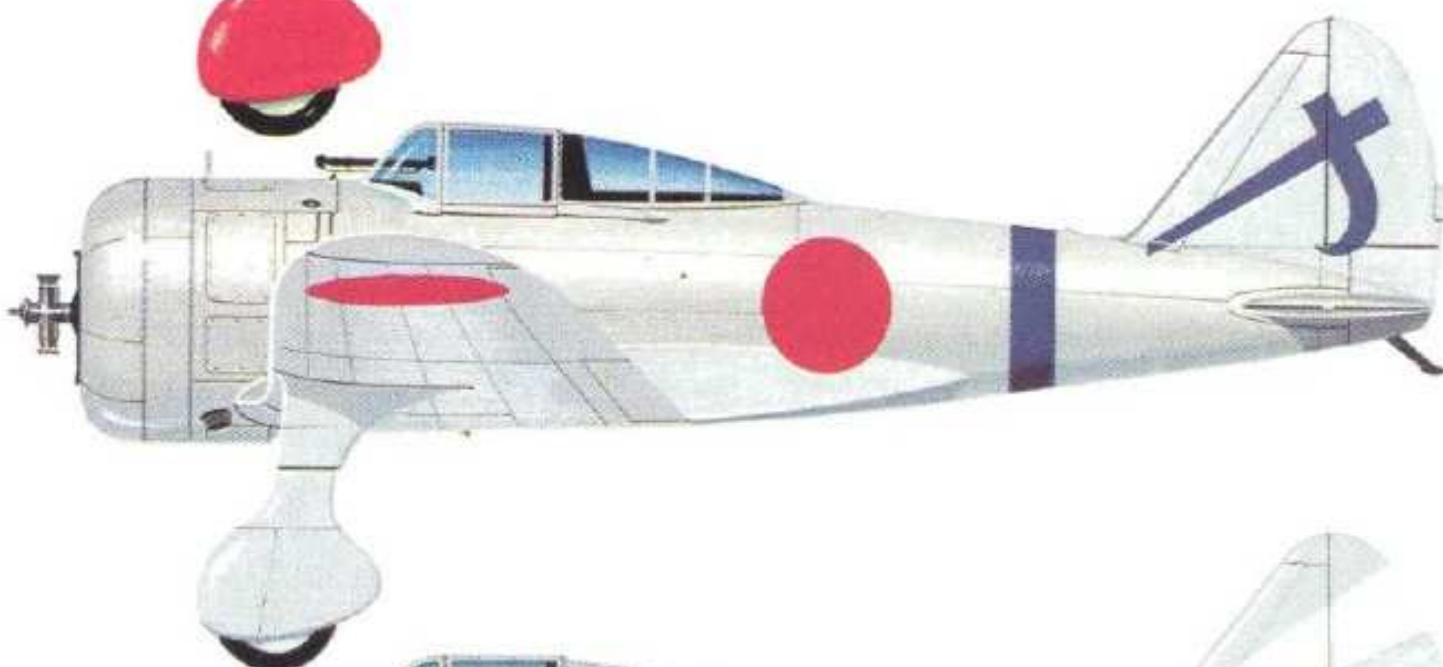
Below: Modified Nakajima Ki.27b-Kai trainers on the flight strip at the Akeno Army Flying School, summer 1942. (Koku Jidai via Bueschel).



1
Nakajima Ki.27b, 1st Air Combat Regiment,
1st Company, Hong Kong, February 1942.



2
Nakajima Ki.27b, 9th Air Combat Regiment,
Headquarters Company, Nomonhan Incident,
September 1939.



3
Nakajima Ki.27a, 11th Air Combat Regiment,
1st Company, Nomonhan Incident, summer and
fall 1939. Aircraft flown by Captain Shimada
who shot down eight Russian aircraft during
one engagement near Harbin, Manchoukuo,
May 27th 1939. Note score under cockpit,
eight red stars.



4A
13th Air Combat Regiment.

4
Nakajima Ki.27b, 13th Air Combat Regiment,
1st Company, Fall 1941–spring 1943.

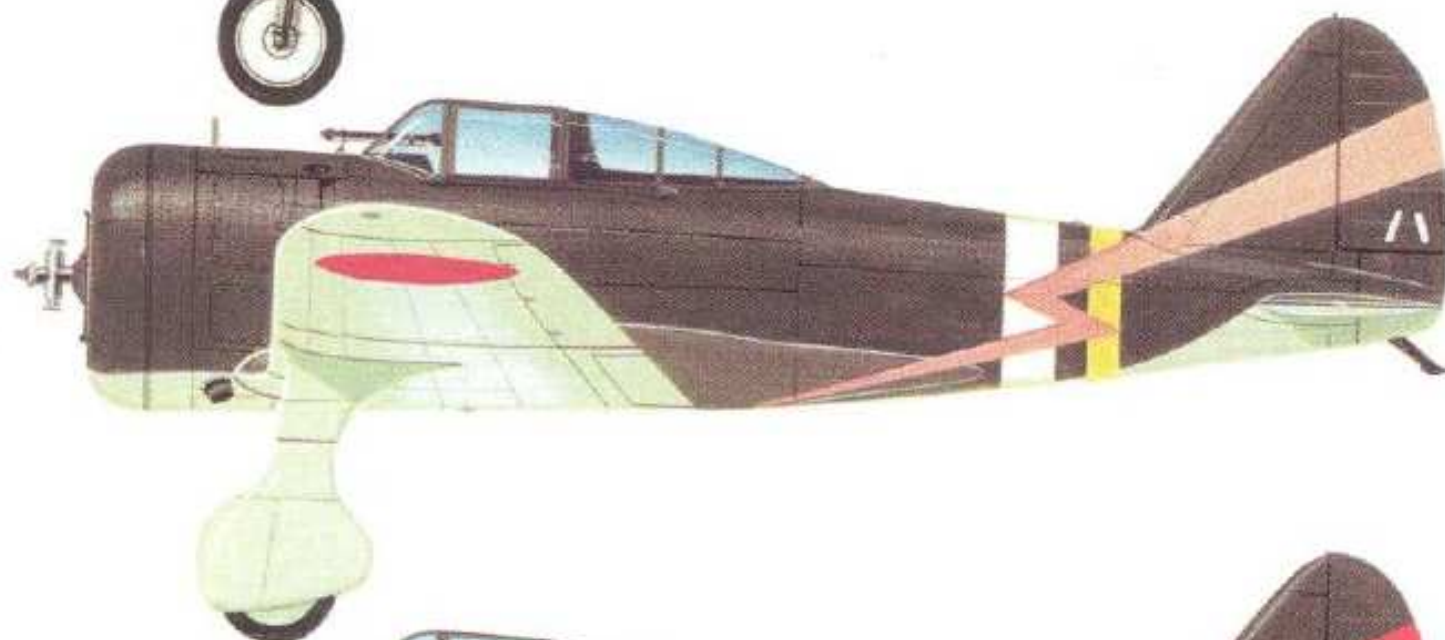


5
Nakajima Ki.27a, 24th Air Combat Regiment,
3rd Company, Nomonhan Incident and Halharu,
Manchoukuo on Counter Soviet Patrol, Sep-
tember 1938–1940.

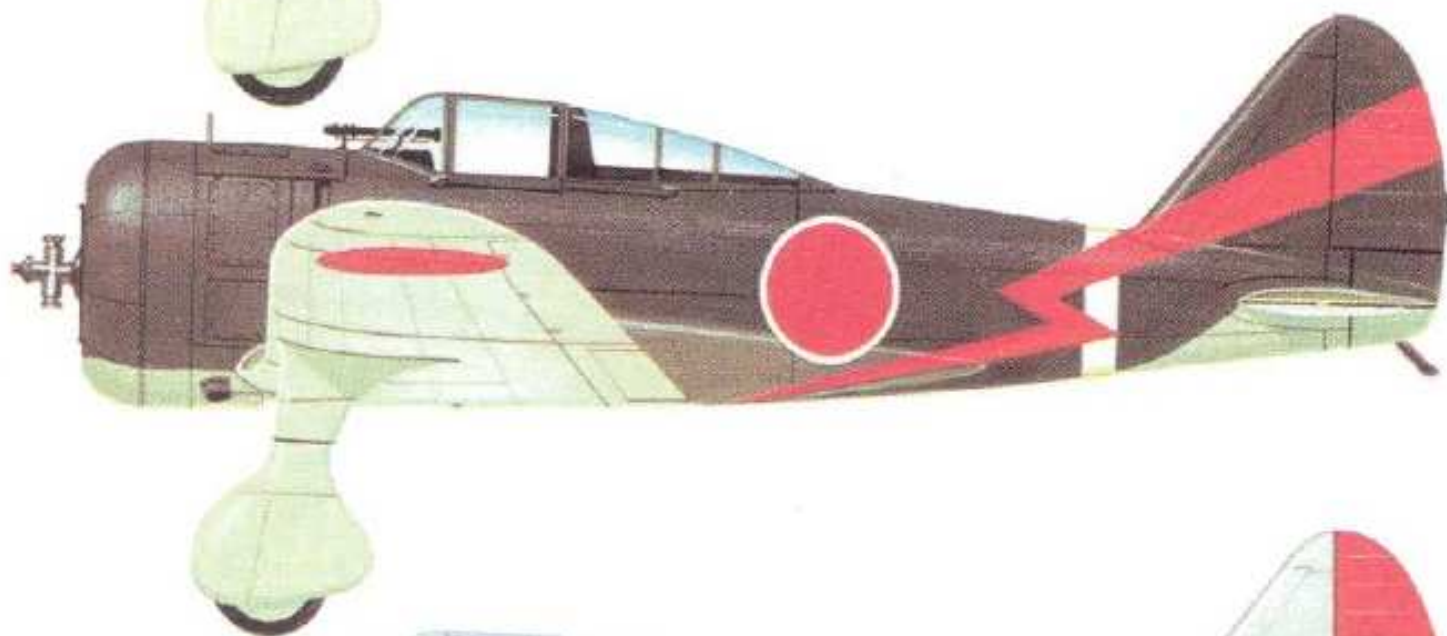




1
Nakajima Ki.27b-Kai, 47th Air Combat Regiment, Tokyo Air Defence, Summer 1944. Used for courier and training duties only.



2
Nakajima Ki.27b, 50th Air Combat Regiment, 1st Company, Burma and Thailand, Summer 1942.



3
Nakajima Ki.27b, 50th Air Combat Regiment, 1st Company, Burma late 1942.

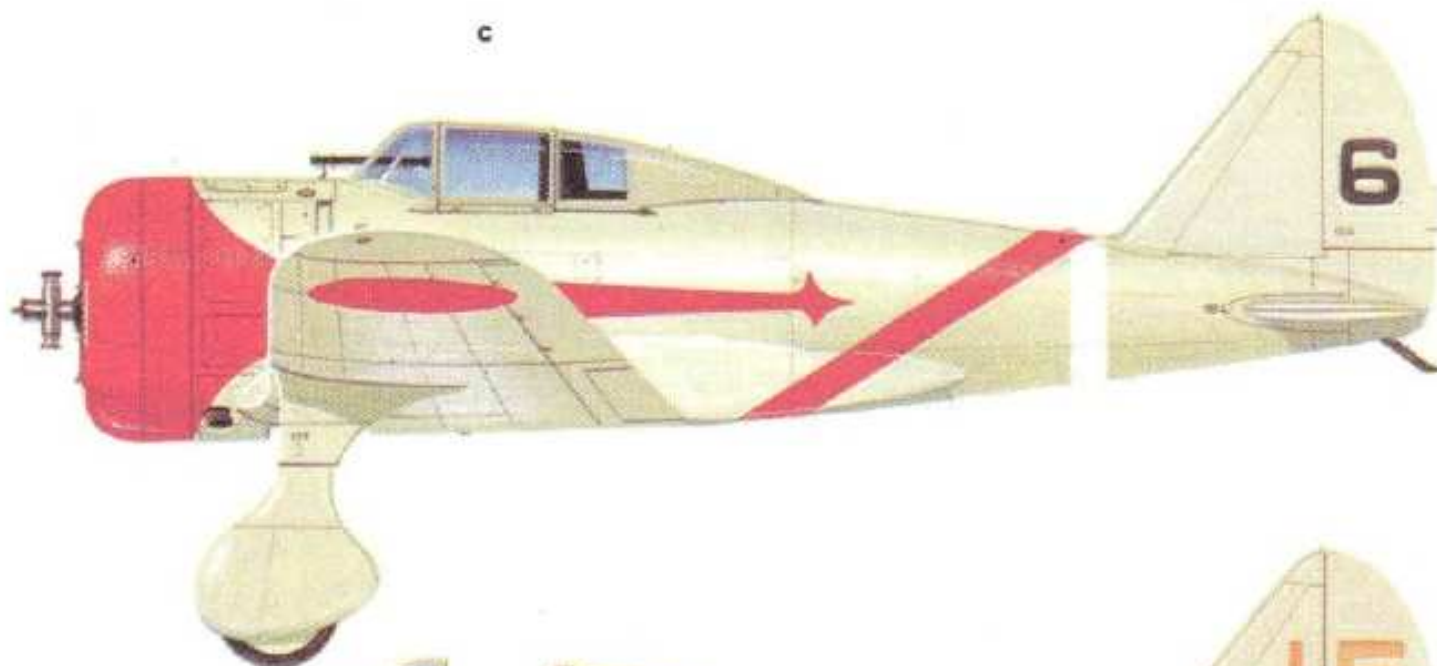


4
Nakajima Ki.27a, 59th Air Combat Regiment, 1st Company. First unit to receive the Ki.27. Markings applied prior to going to China, December 1938.



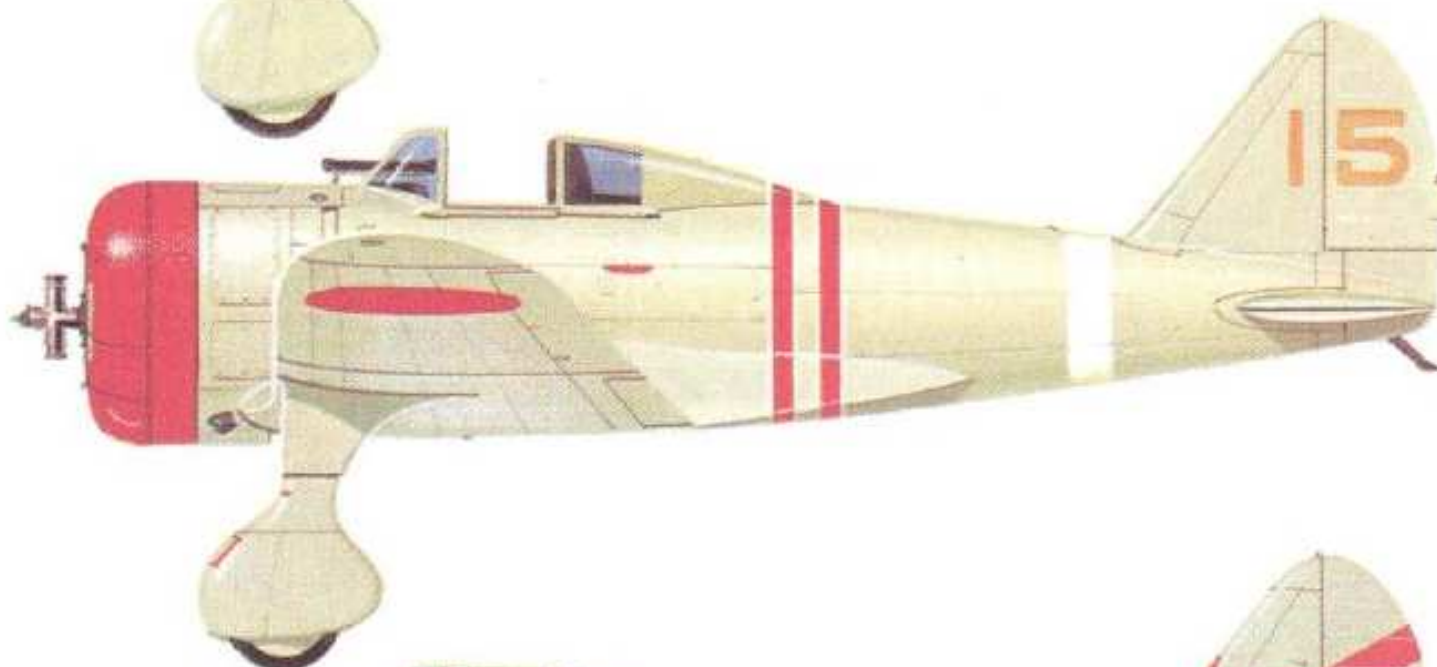
5
Nakajima Ki.27a, 59th Air Combat Regiment, 2nd Company, Squad Leader, China, January 1941.

1
Nakajima Ki.27a, 64th Air Combat Regiment,
2nd Company. Aircraft flown by Lt. Iori Sakai
Central China, November 1938.



2A
Hawk insignia see E.3

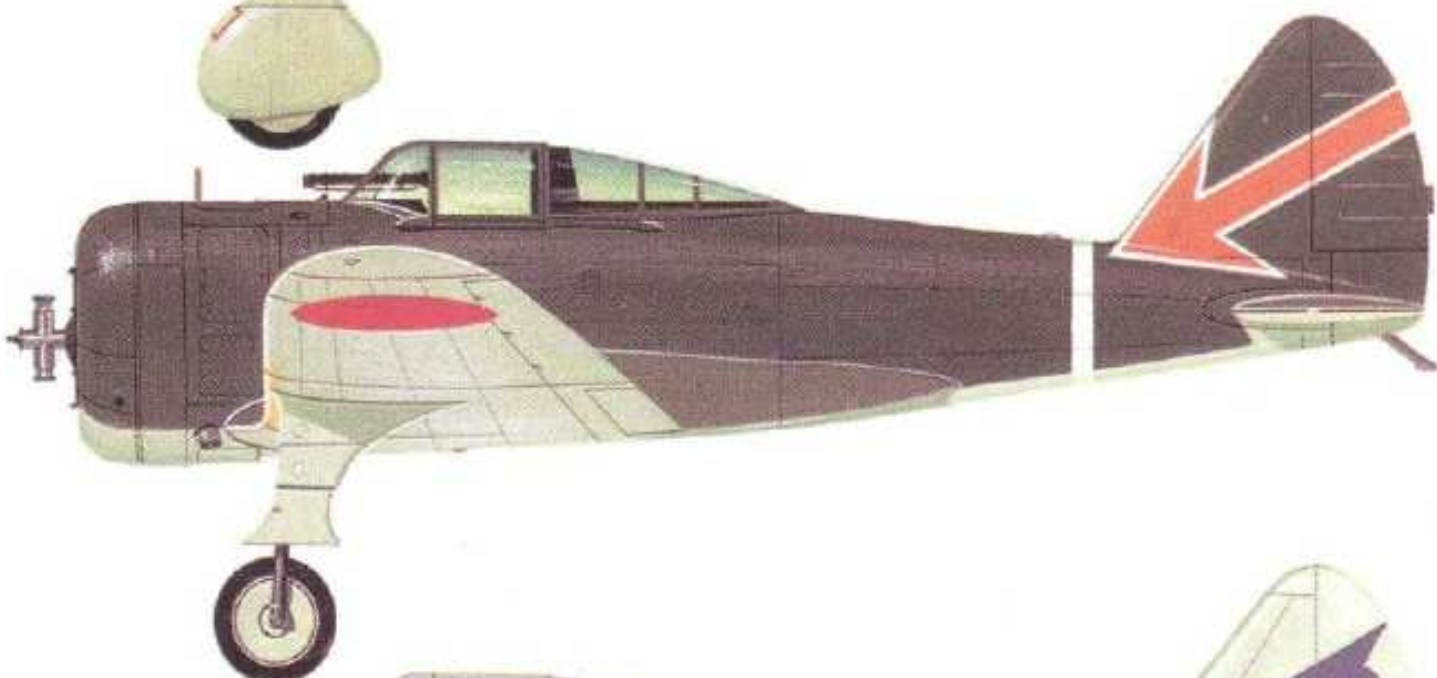
2
Nakajima Ki.27a, 64th Air Combat Regiment,
2nd Company, Nomonhan Incident, Shotoru,
Manchoukuo, Summer-fall 1939.



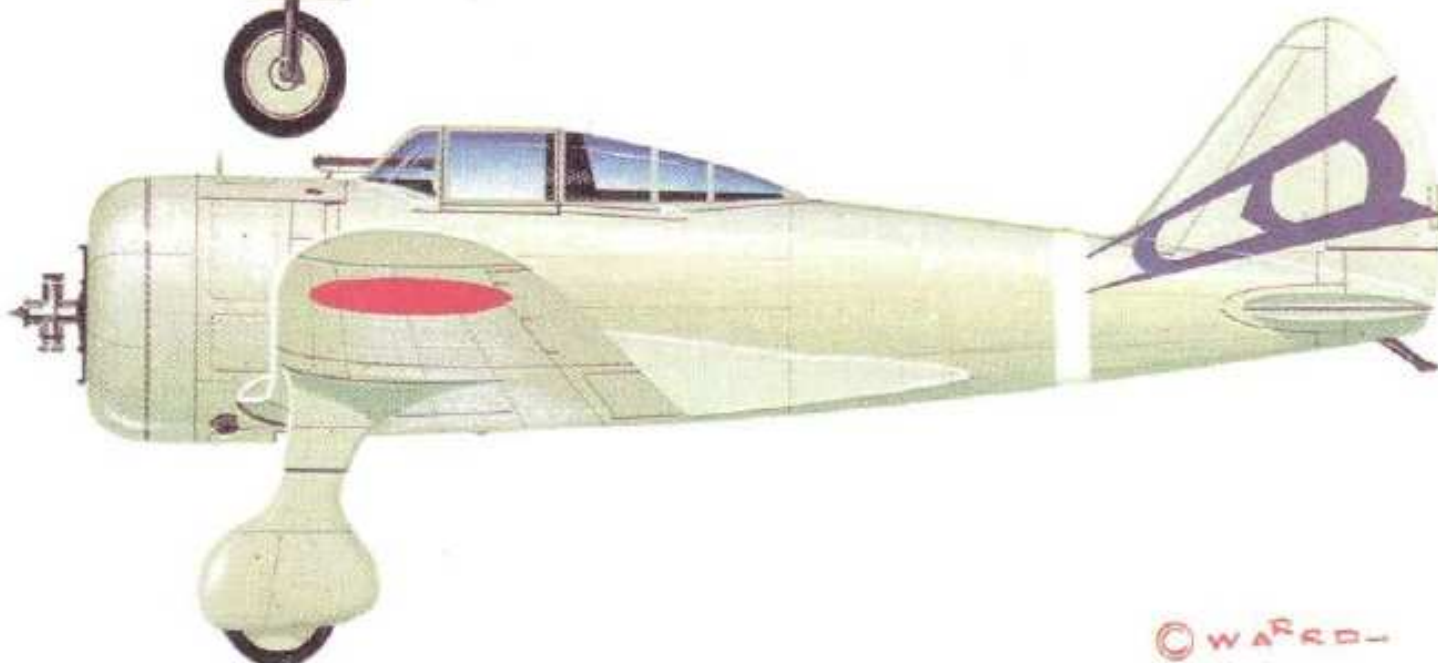
3
Nakajima Ki.27b, 64th Air Combat Regiment,
2nd Company, Central China, 1940-41.

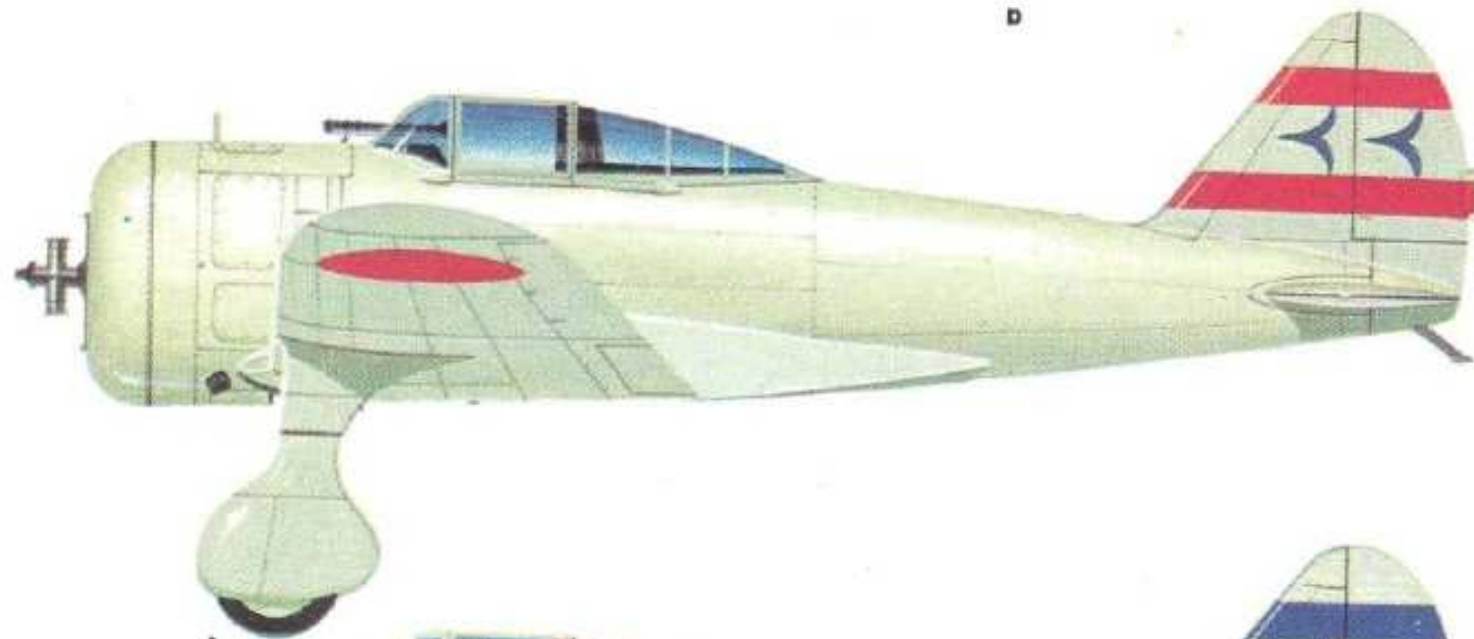


4
Nakajima Ki.27b-Kai, 64th Air Combat Regiment,
3rd Company. Used on liaison and
communication duties after unit re-equipped
with Ki.43 Hayabusa. Thailand, Malaya and
Sumatra, February 1942.

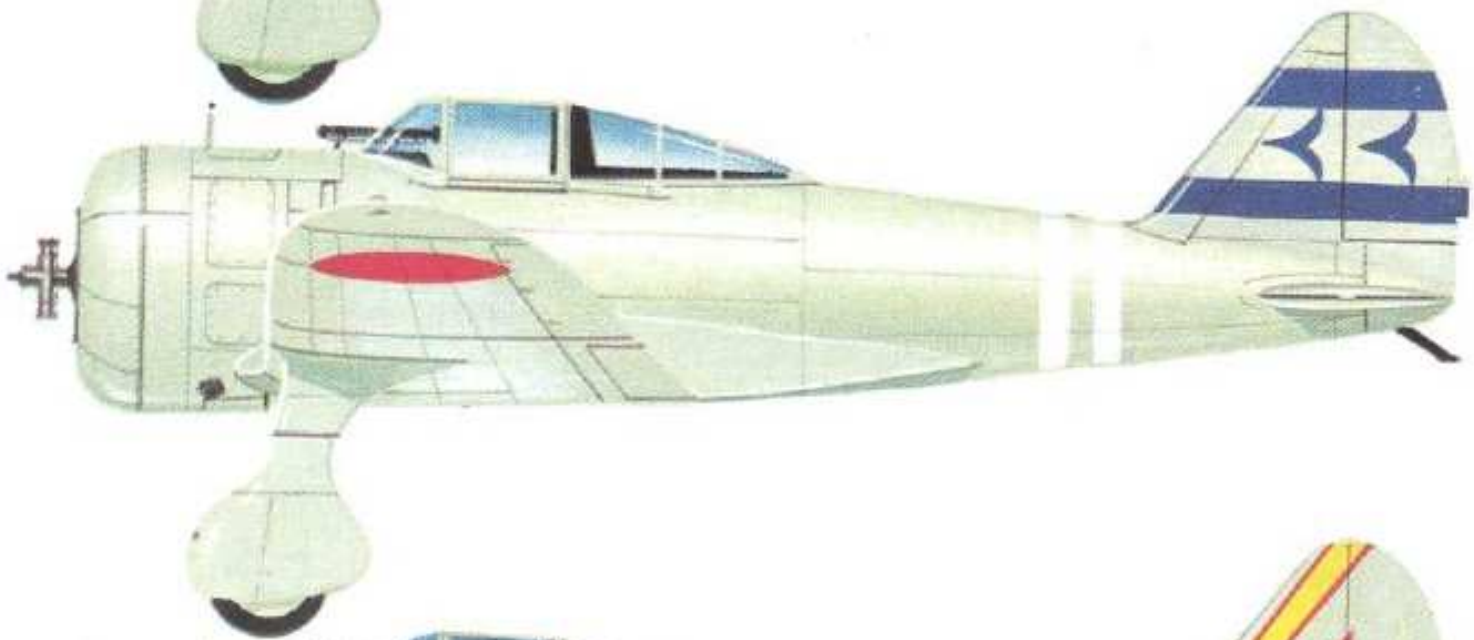


5
Nakajima Ki.27b, 68th Air Combat Regiment,
Headquarters Company, Counter Soviet Patrol,
Harbin, Manchoukuo, 1942.

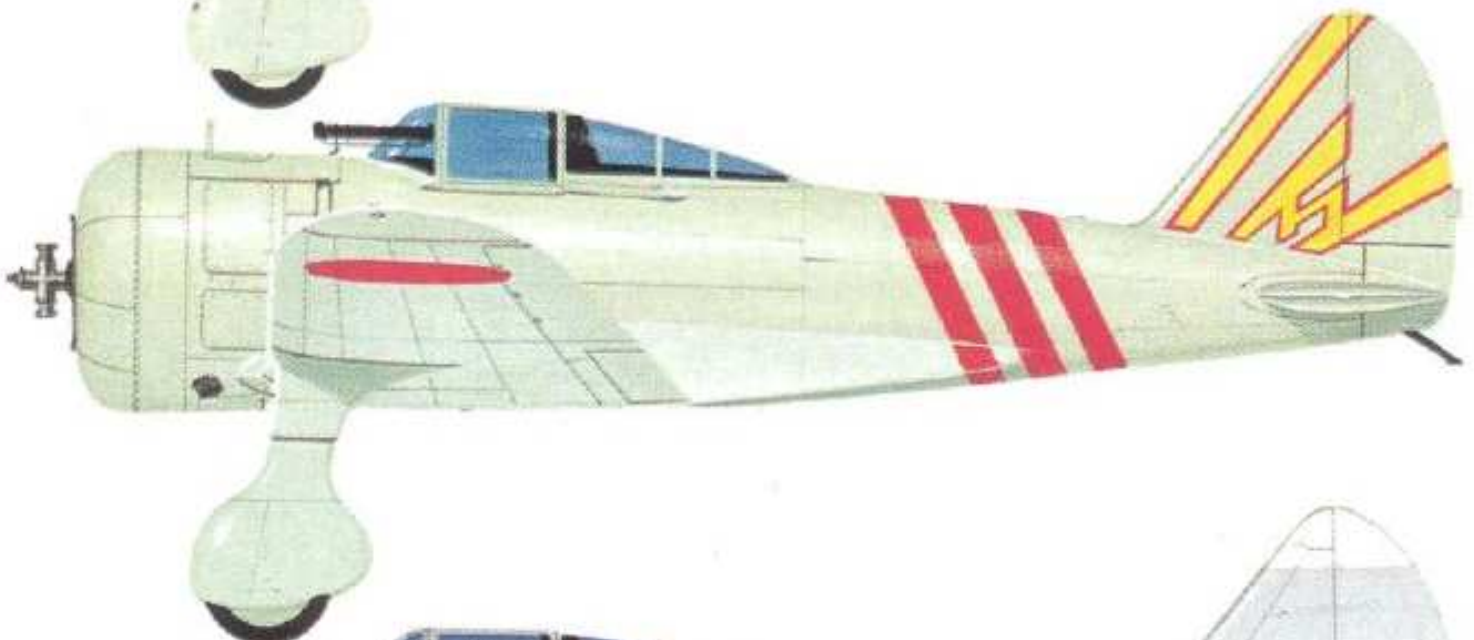




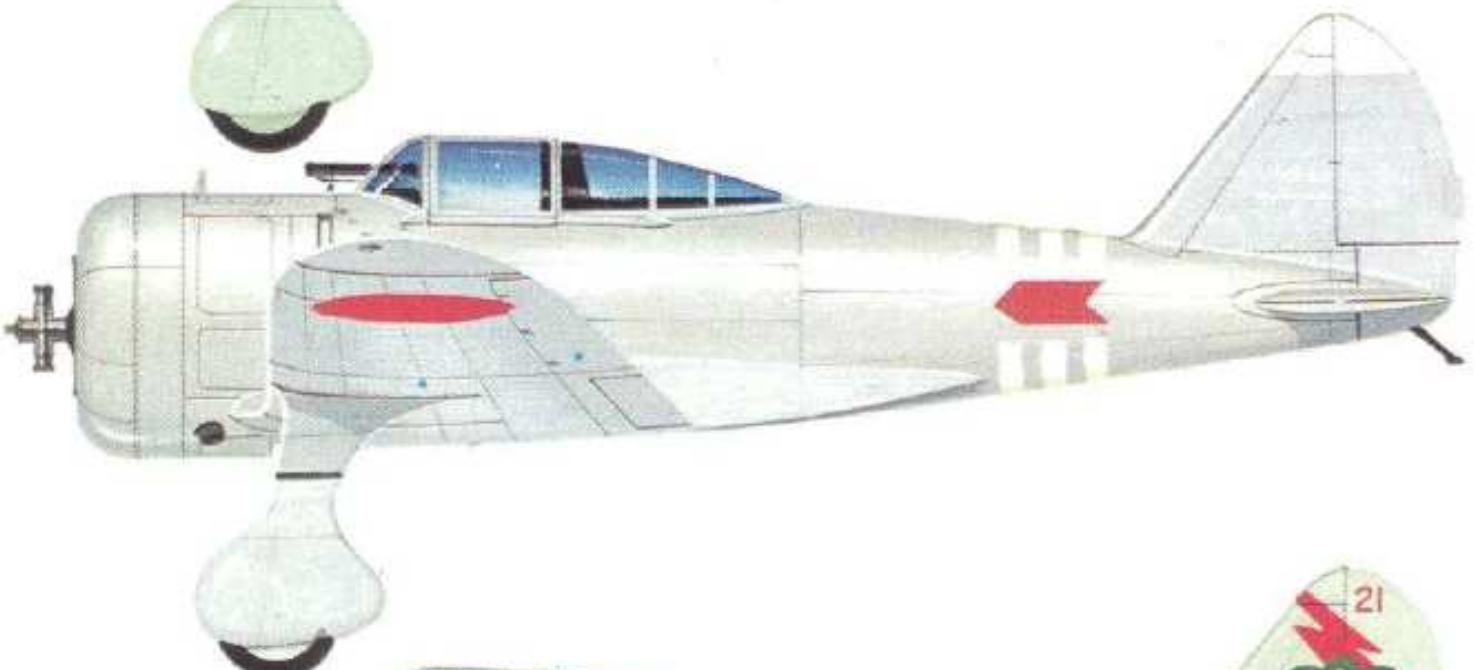
1
Nakajima Ki.27b, 77th Air Combat Regiment,
2nd Company, Counter Soviet Patrol, Man-
choukuo, October 1940.



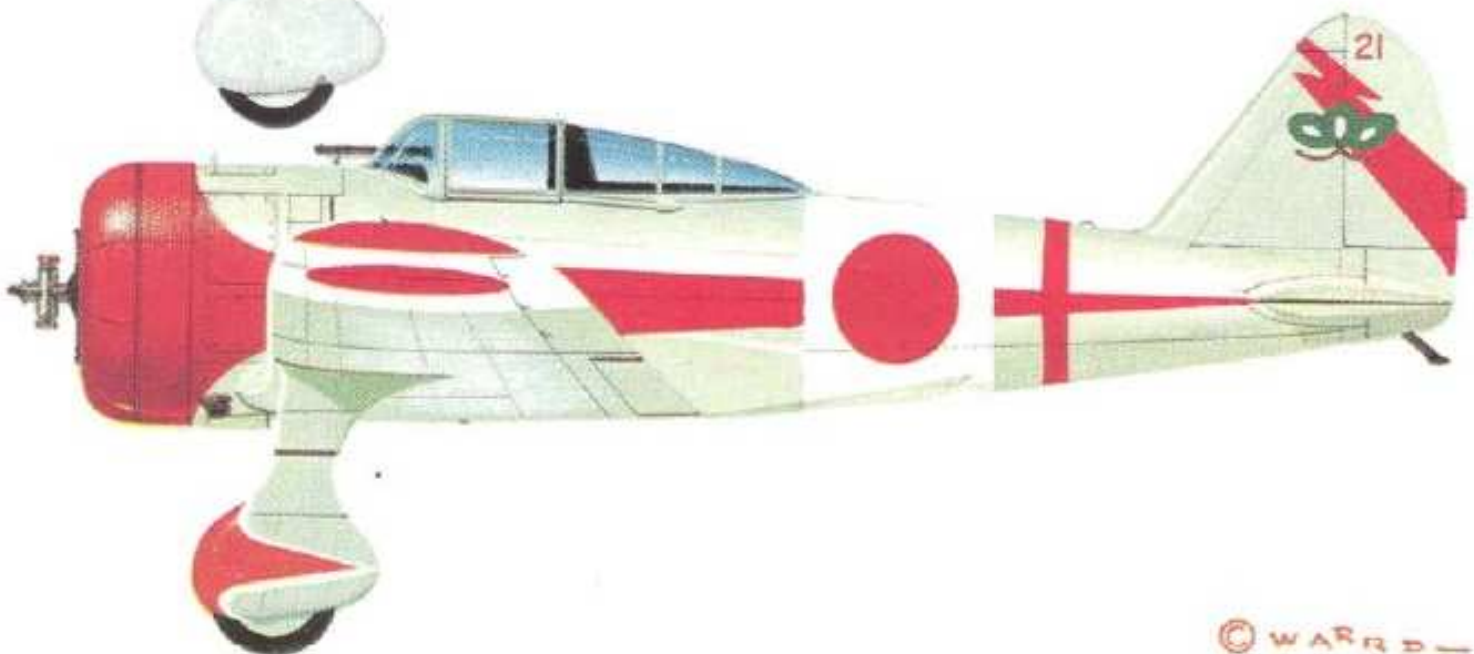
2
Nakajima Ki.27b, 77th Air Combat Regiment,
Headquarters Company, Meshod, Thailand.
Shot down by the AVG Flying Tigers over
Mingaladon, Burma, December 1941.



3
Nakajima Ki.27b, 85th Air Combat Regiment,
3rd Company, Counter Soviet Patrol, Man-
choukuo, 1941-1942.



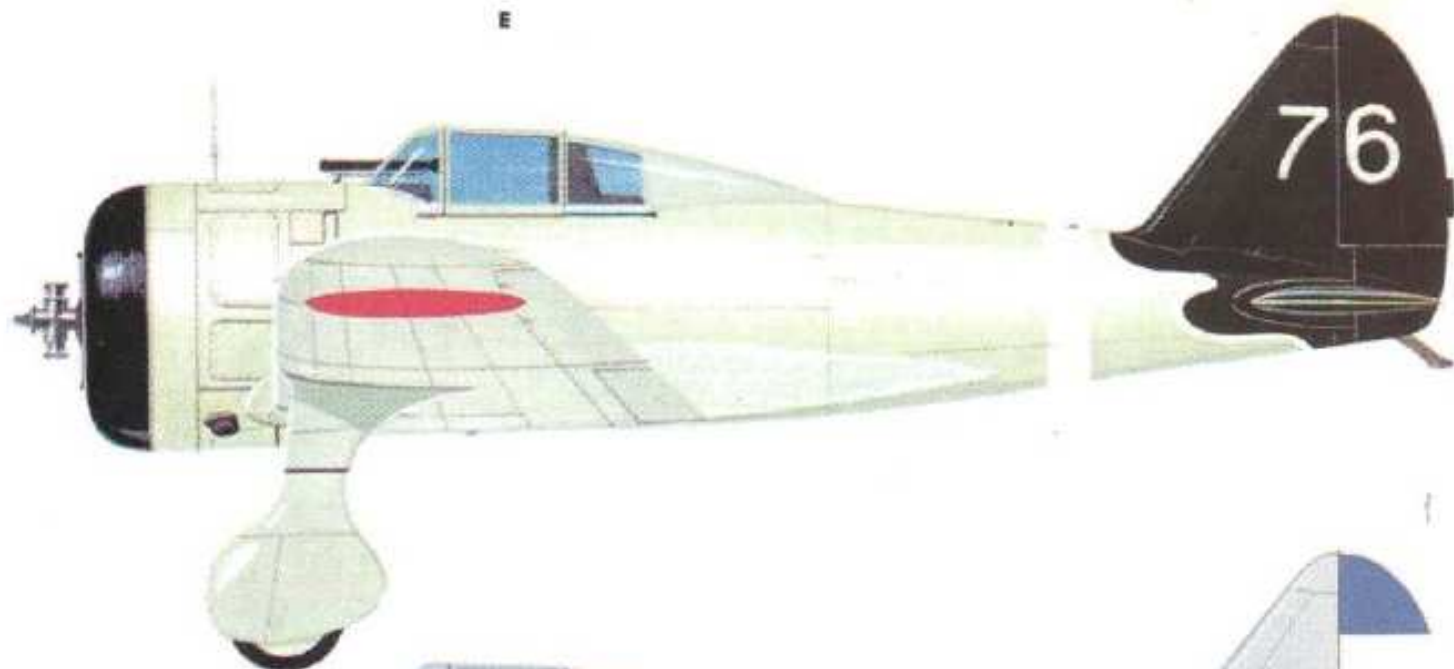
4
Nakajima Ki.27b, 204th Air Combat Regiment,
2nd Company, Home Island Defence, Kyushu,
Japan, 1942.



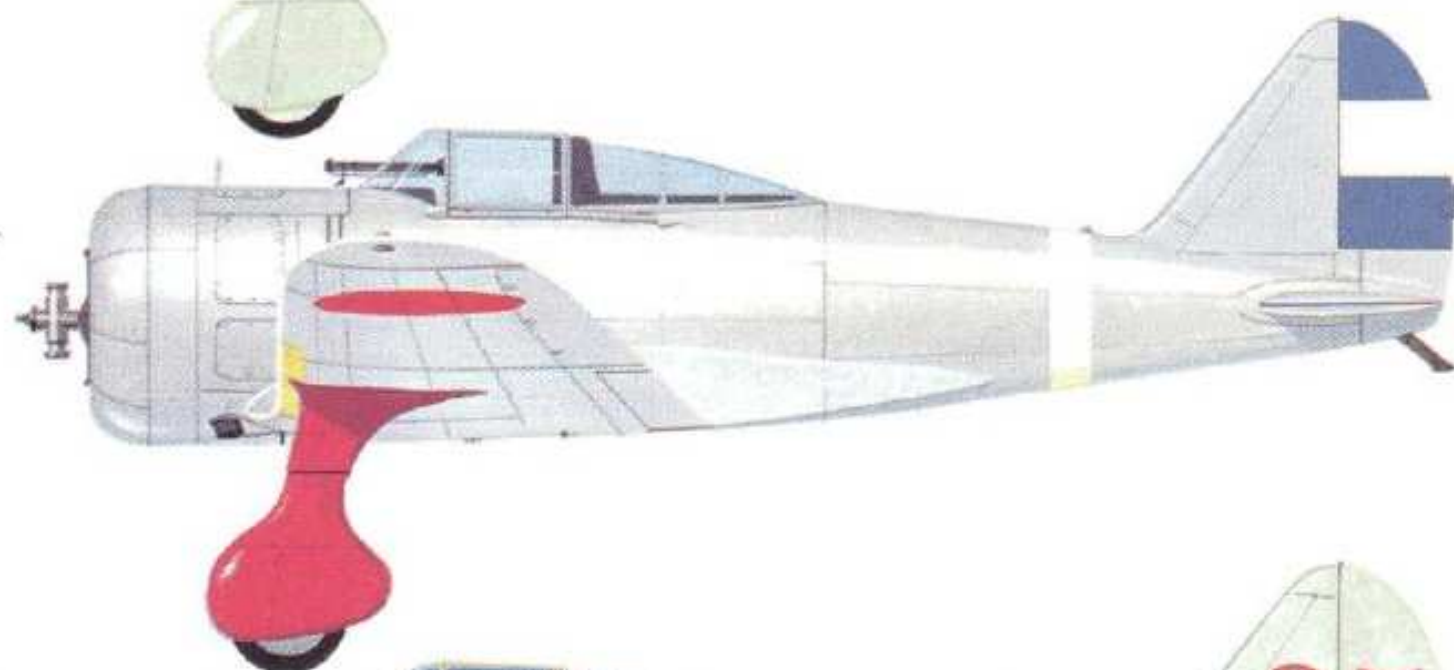
5A
246th Air Combat Regiment.
5
Nakajima Ki.27b, 246th Air Combat Regiment,
2nd Company, Home Island Defence, Osaka,
Japan, 1943.



1
Nakajima Ki.27a, 10th Independent Fighter
Company, North China 1938-1940. Black
cowl indicates Squad Leader.



2
Nakajima Ki.27b, 10th Independent Fighter
Company, 2nd Squad, Manchoukuo and China
1940-1942.



3A
Hawk insignia, 84th Independent Fighter
Company.

3
Nakajima Ki.27b, 84th Independent Fighter
Company, 2nd Squad. (3rd Company, 64th
Air Combat Regiment) China and French-
Indo China 1941.



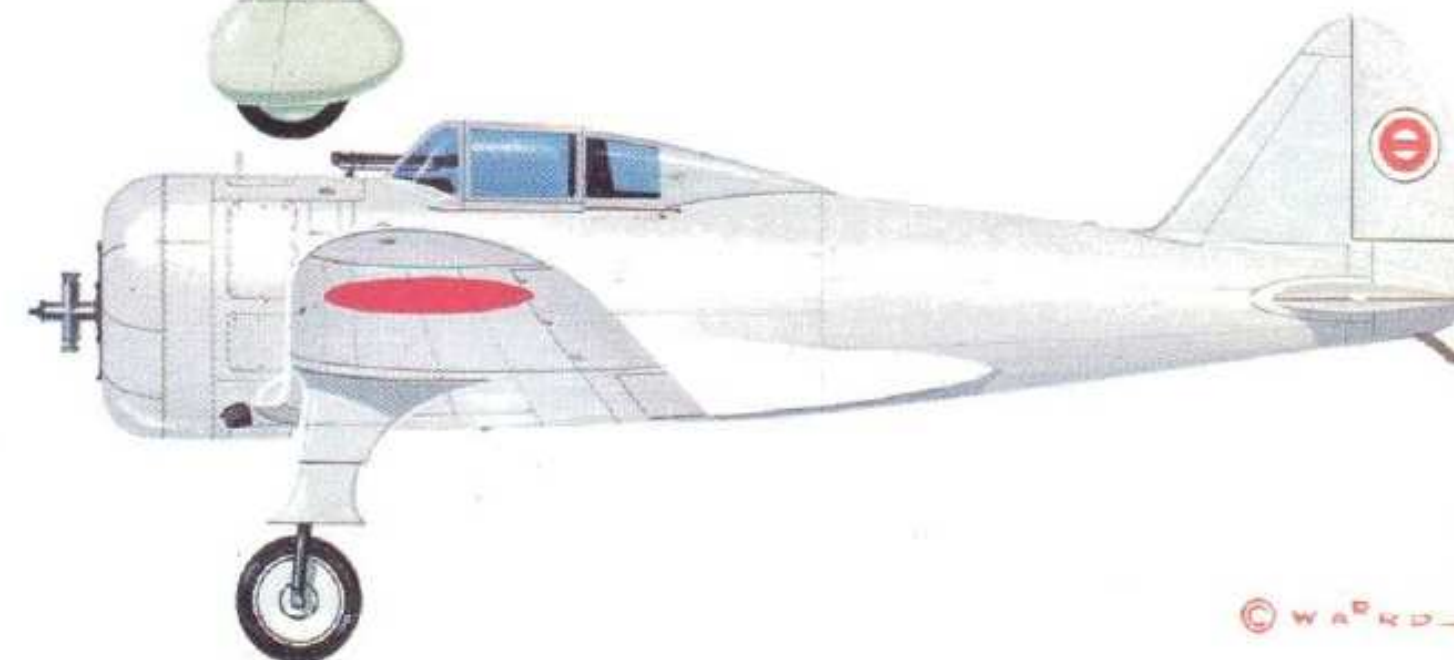
4A
Unidentified unit.

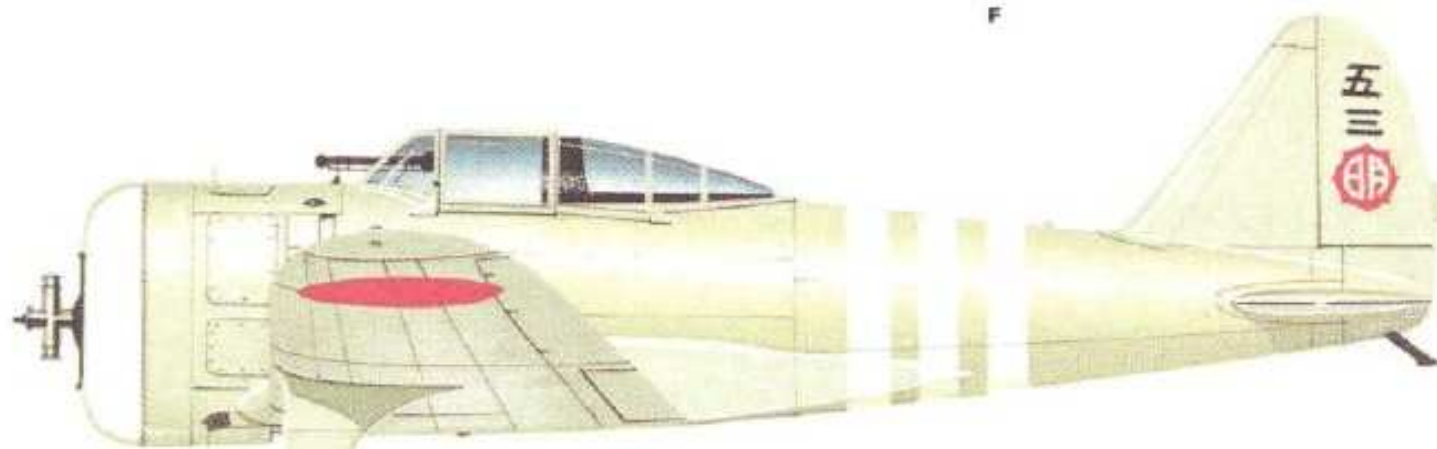
4
Nakajima Ki.27b, Unidentified Air Combat
Regiment or more probably a Flight Training
Company. Anti-Soviet Patrol.



5A
Kumagaya Army Flying School.

5
Nakajima Ki.27a-Kai, Kumagaya Army Flying
School. Summer 1940.



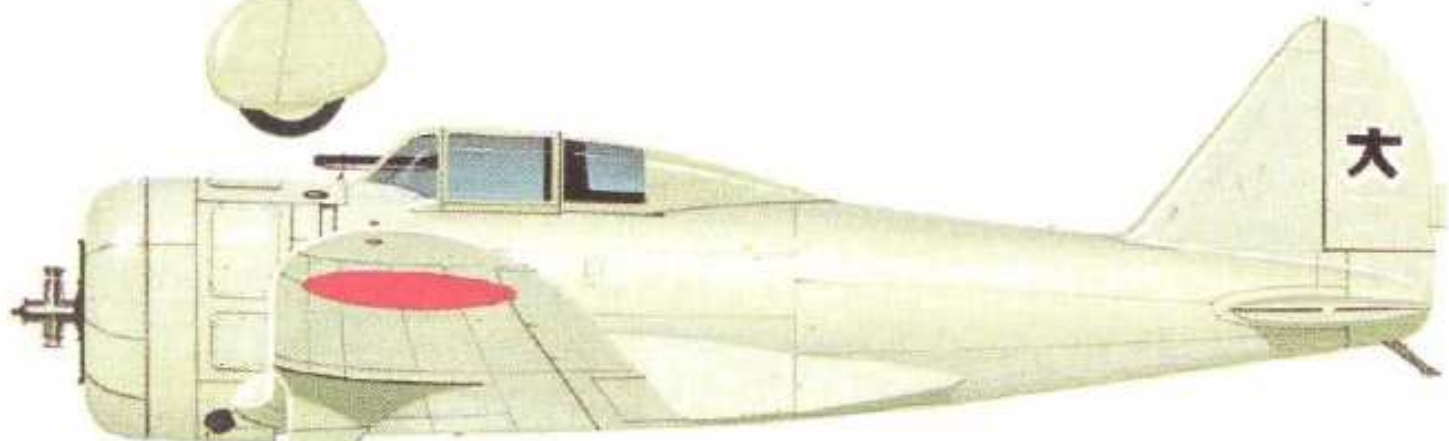


1A
Akeno Army Flying School.

1
Nakajima Ki.27b, Akeno Army Flying School,
November 1941.

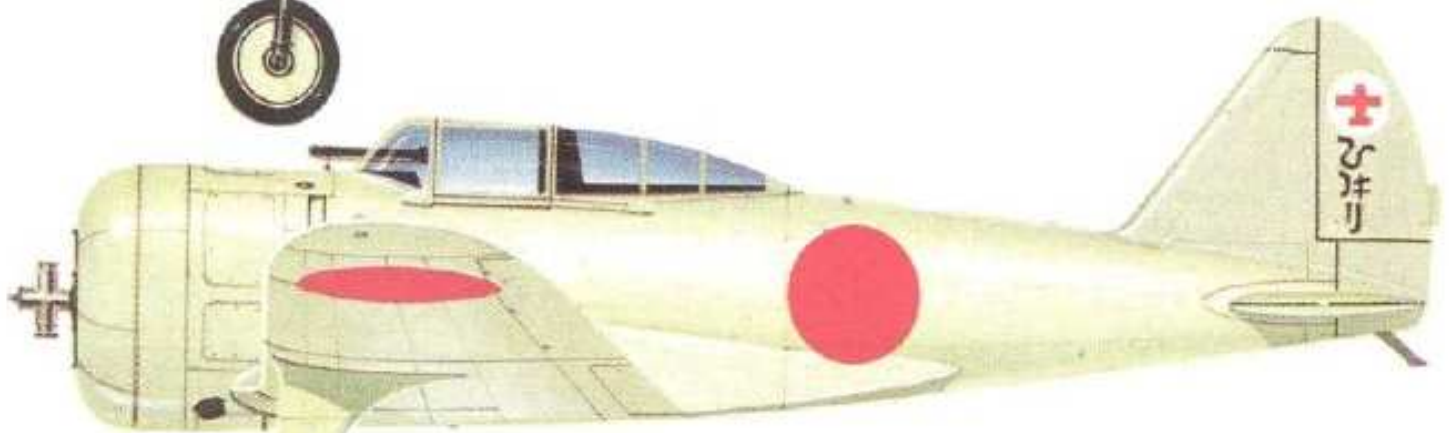


2
Nakajima Ki.27b, Akeno Army Flying School,
July 1942.



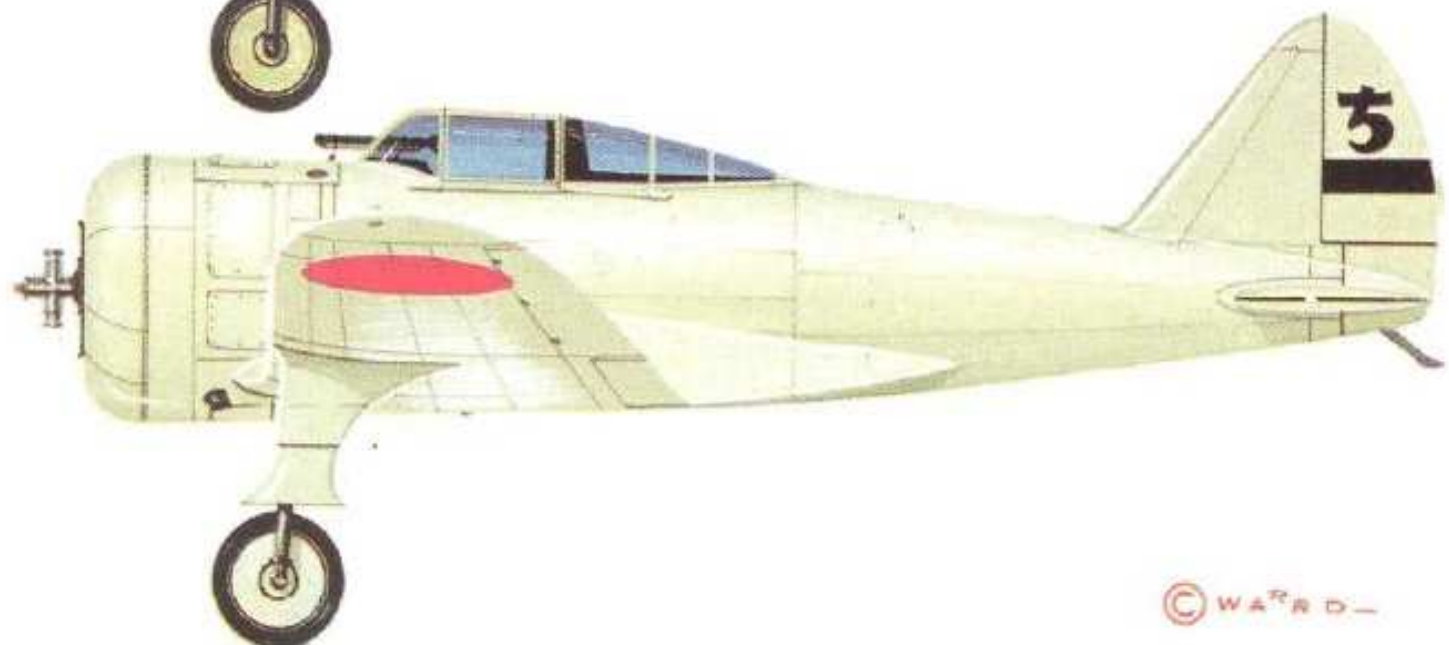
3A
Tachiarai Army Flying School.

3
Nakajima Ki.27a-Kai, Tachiarai Army Flying
School, May 1942.



4A
Military Flying Academy
(Army Air Academy)

4
Nakajima Ki.27b-Kai, Military Flying Academy,
Harbin, Manchoukuo, January 1943.



5
Nakajima Ki.27b-Kai, Army Aviation Main-
tenance School, Tokorozawa, March 1941.



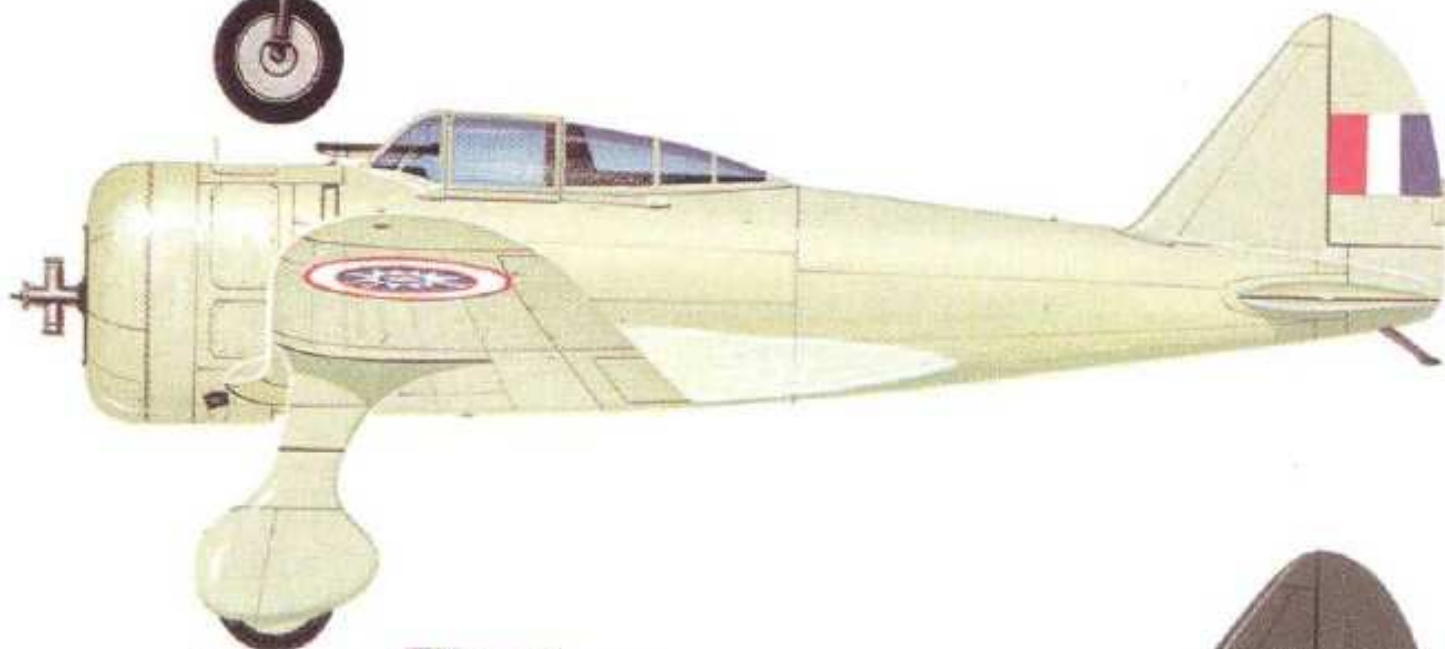
1A
Manchoukuo Air Force.

1
Nakajima Ki.27b-Kai, Manchoukuo Air Force.



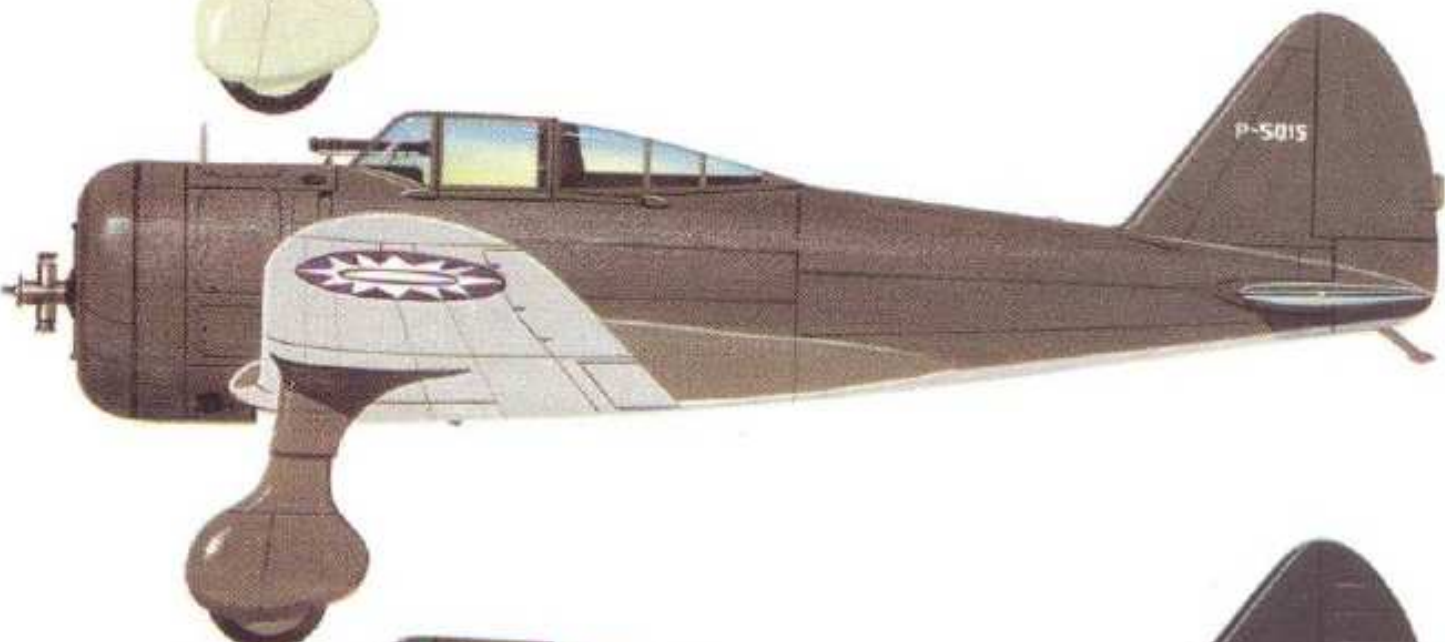
2A
National Government of China Air Force.

2
Nakajima Ki.27b, National Government of China Air Force, Nanking, Occupied China.



3A
Chinese Nationalist Air Force.

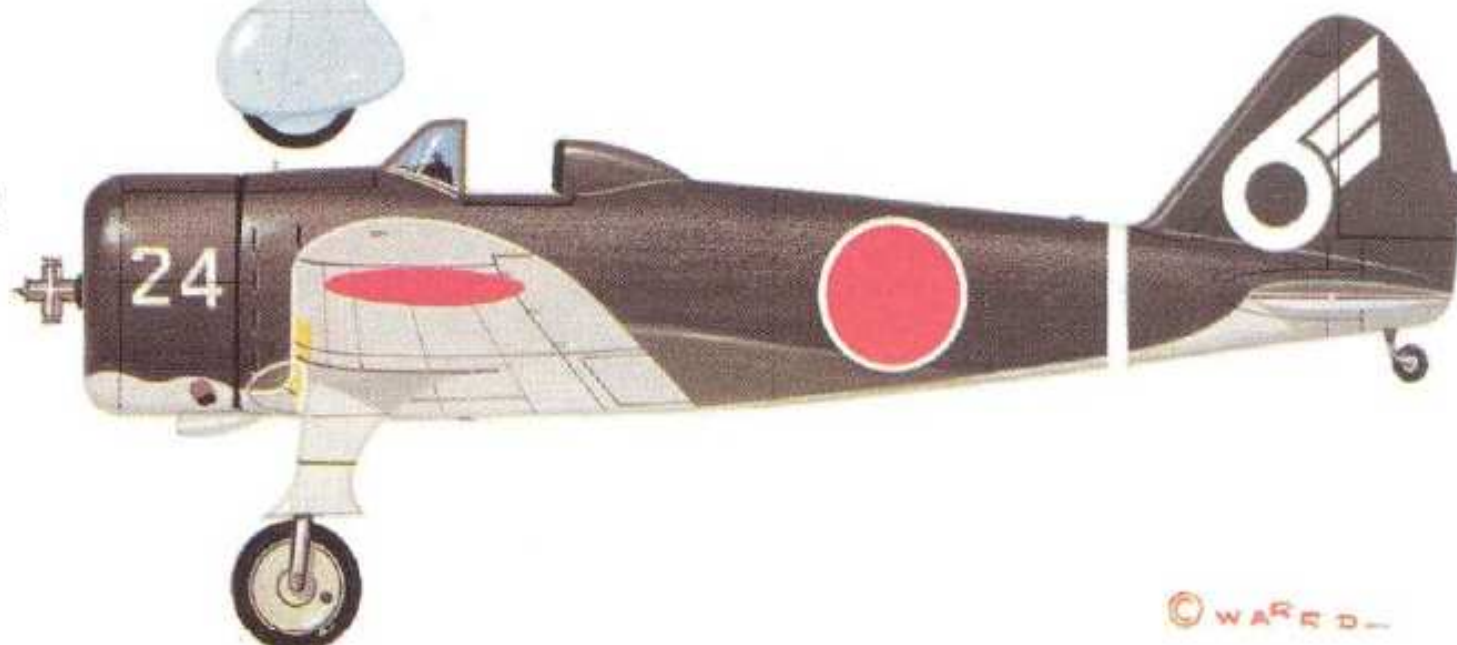
3
Nakajima Ki.27b, Chinese Nationalist Air Force, Captured and test flown 1942, Serial P-5015.

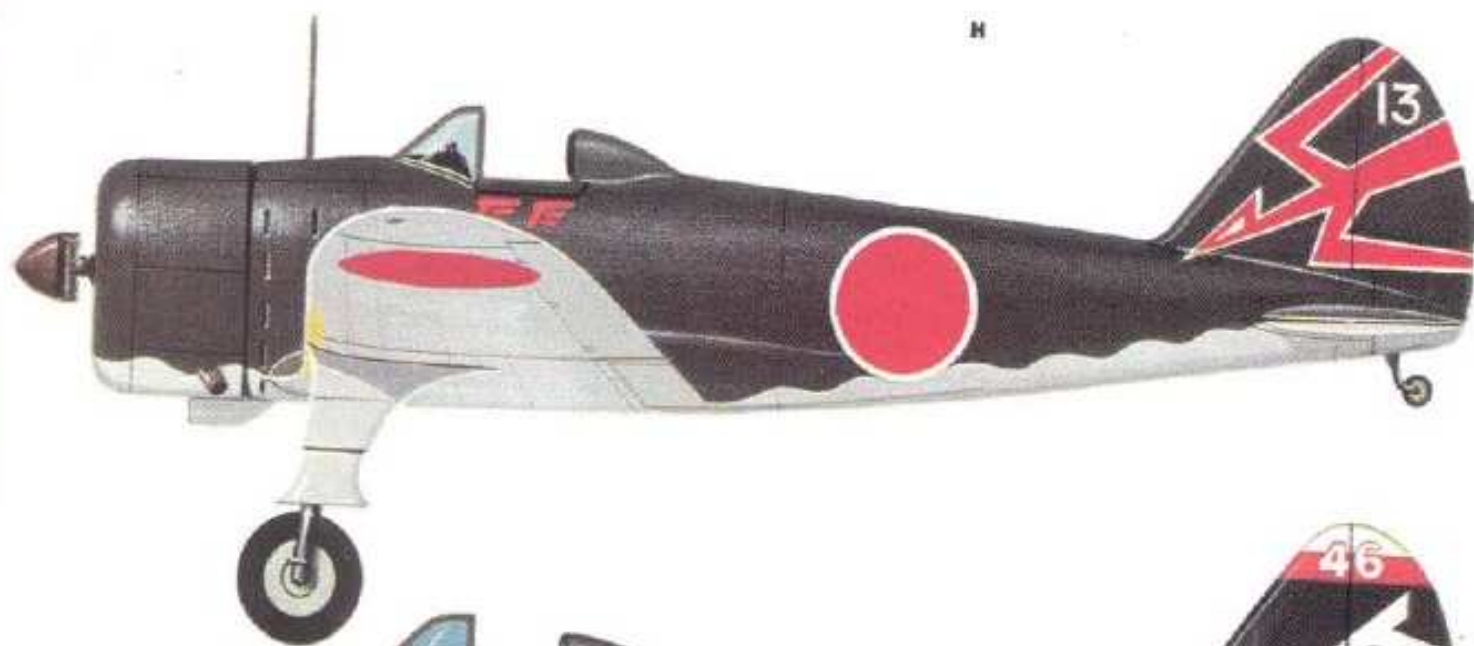


4
Nakajima Ki.27b, Soviet Far-Eastern Air Force Captured and test flown during Nomonhan Incident.

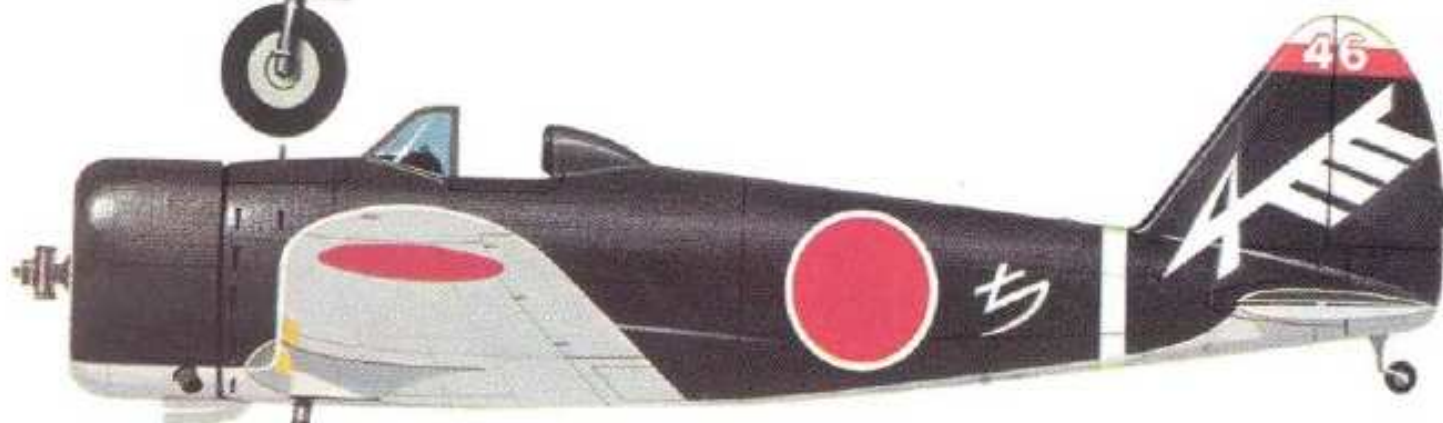


5
Mitsubishi Ki.79a, Unidentified School possibly Army Air Academy, Japan and Harbin, Manchoukuo, late 1944 early 1945.

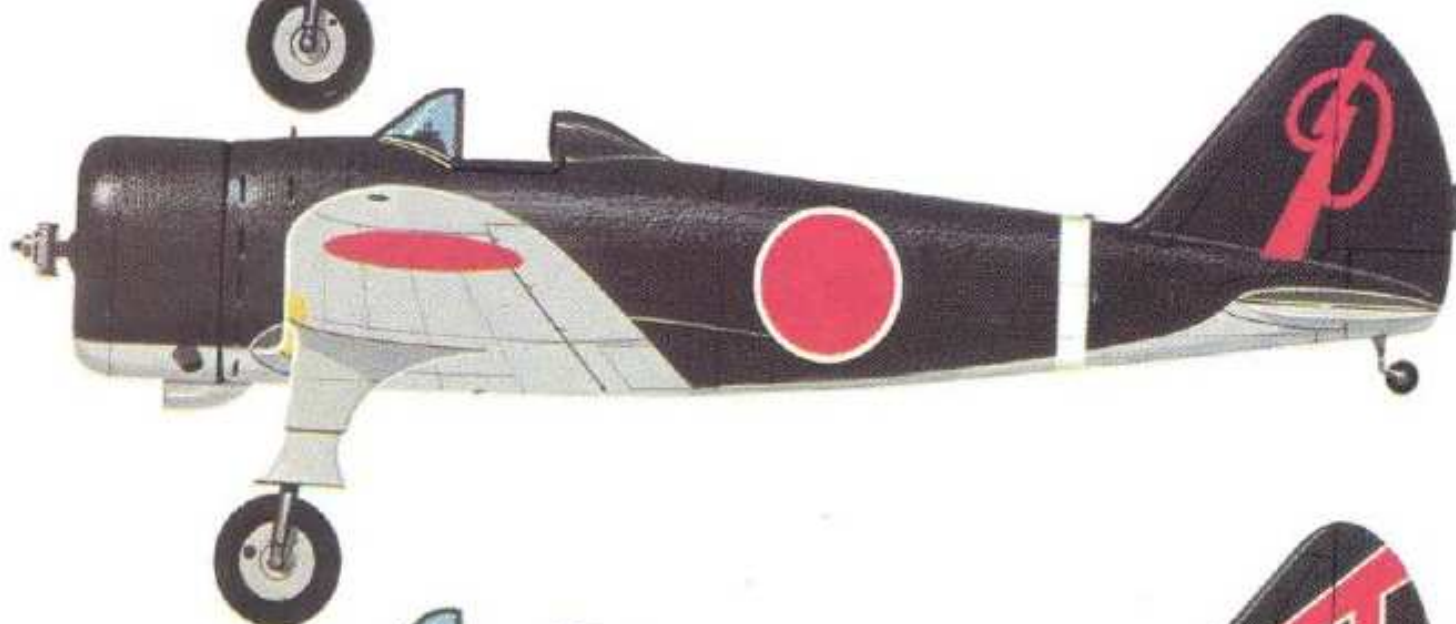




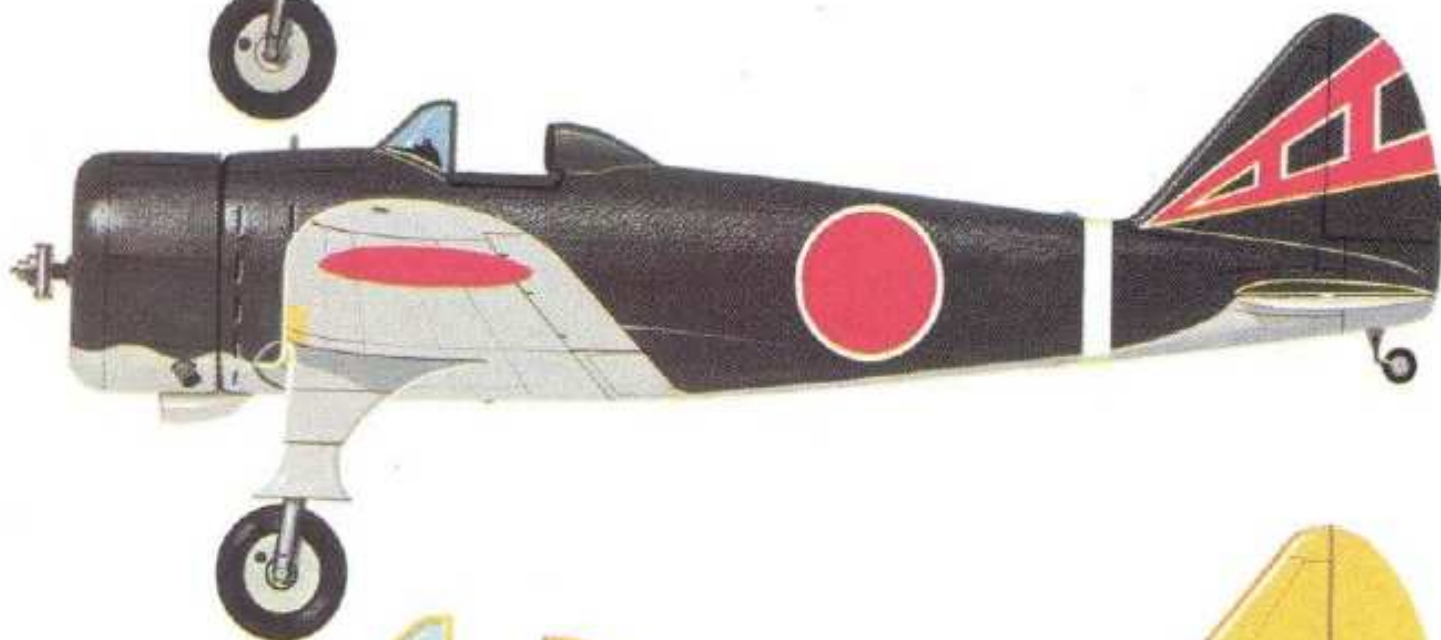
1
Manshu Ki.79a, 39th Flight Training Company
Yokoshiba Airfield, March 1945.



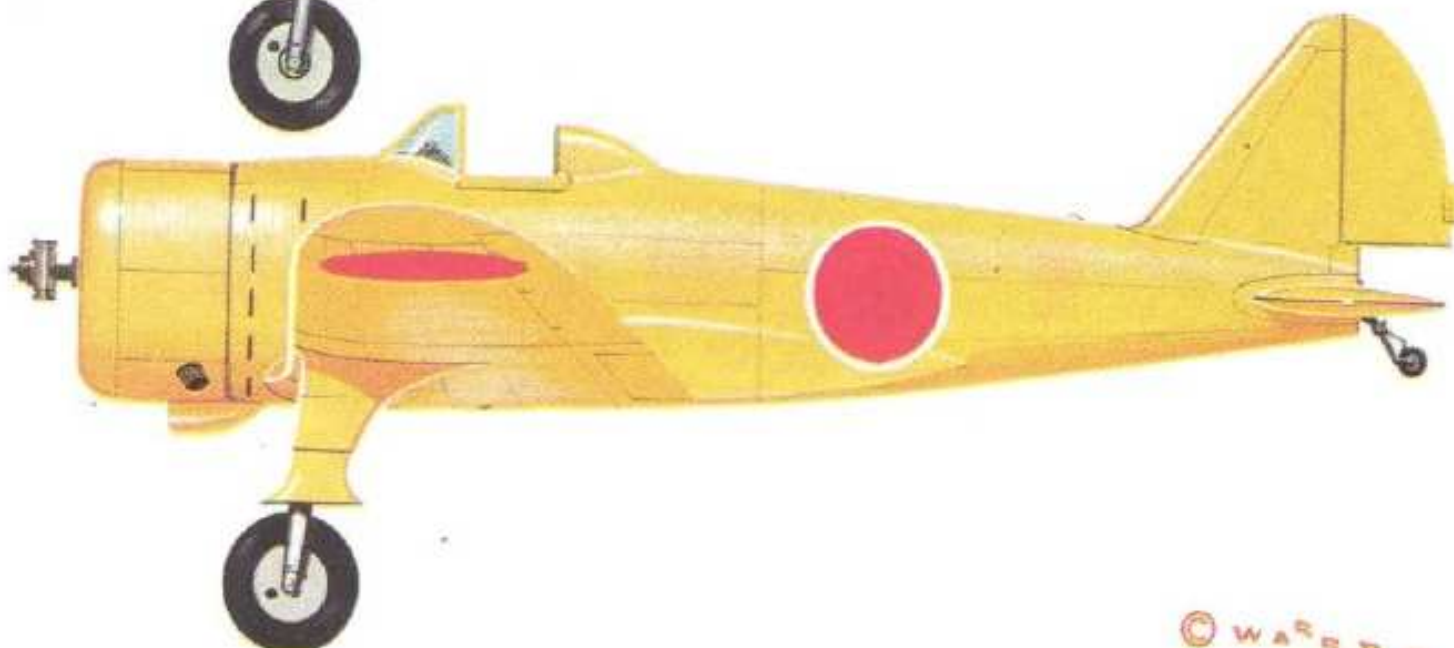
2
Manshu Ki.79a, Unidentified Flight Training
Company, Kallang Airfield, Singapore, August
1945.



3
Manshu Ki.79a, 19th Flight Training Company,
March 1944.

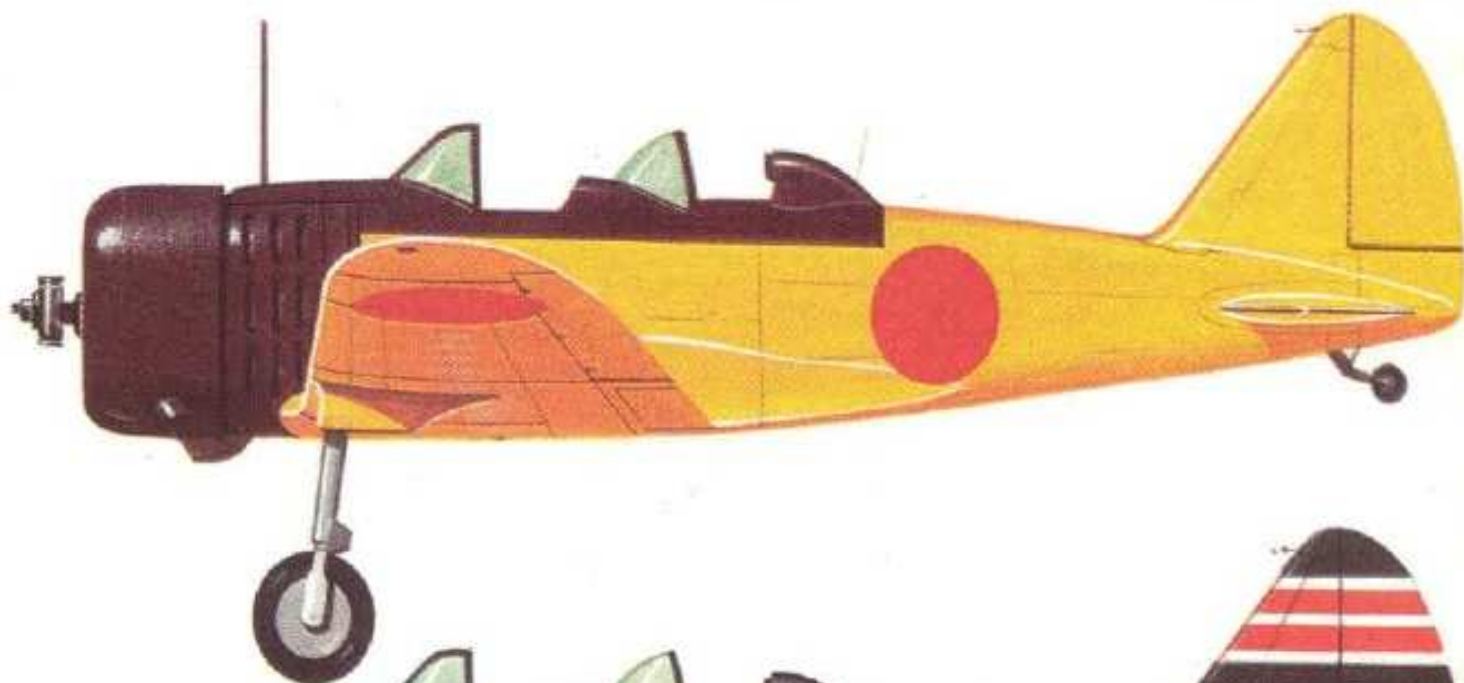


4
Manshu Ki.79a, Unidentified Flight Training
Company, Kallang Airfield, Singapore, 1944.

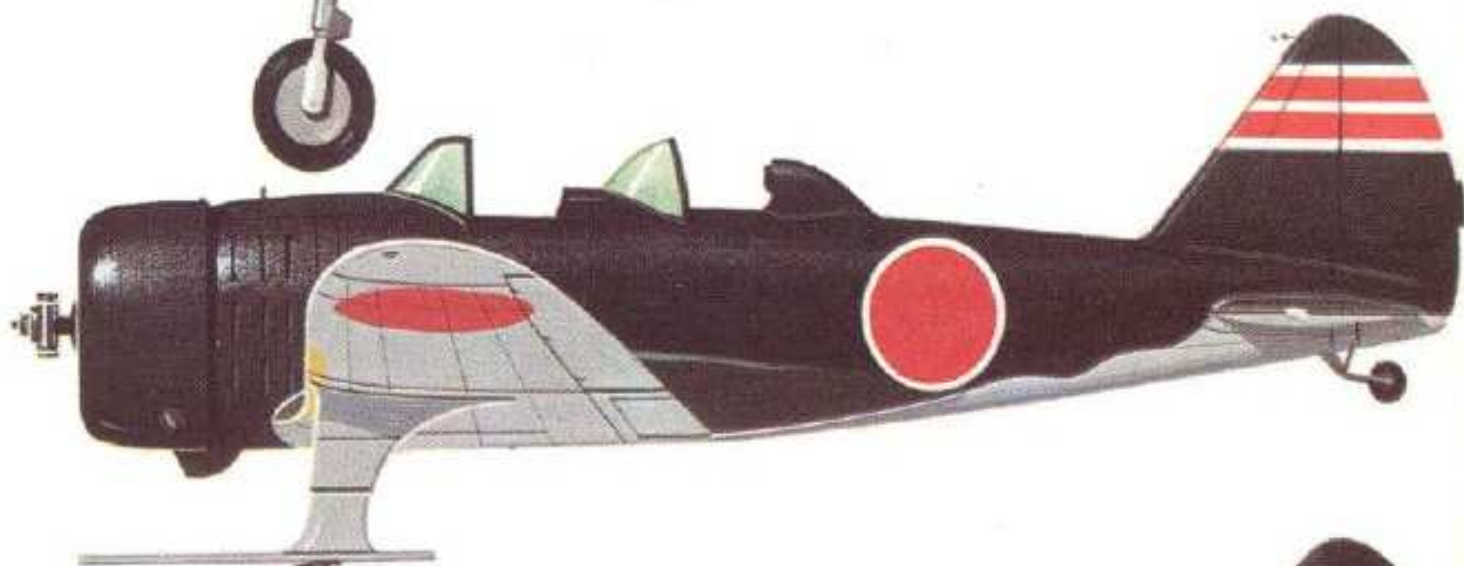


5
Manshu Ki.79a, Assigned to Combat Regiment
for continued training of green pilots. Palawan,
Philippine Islands, November 1944.

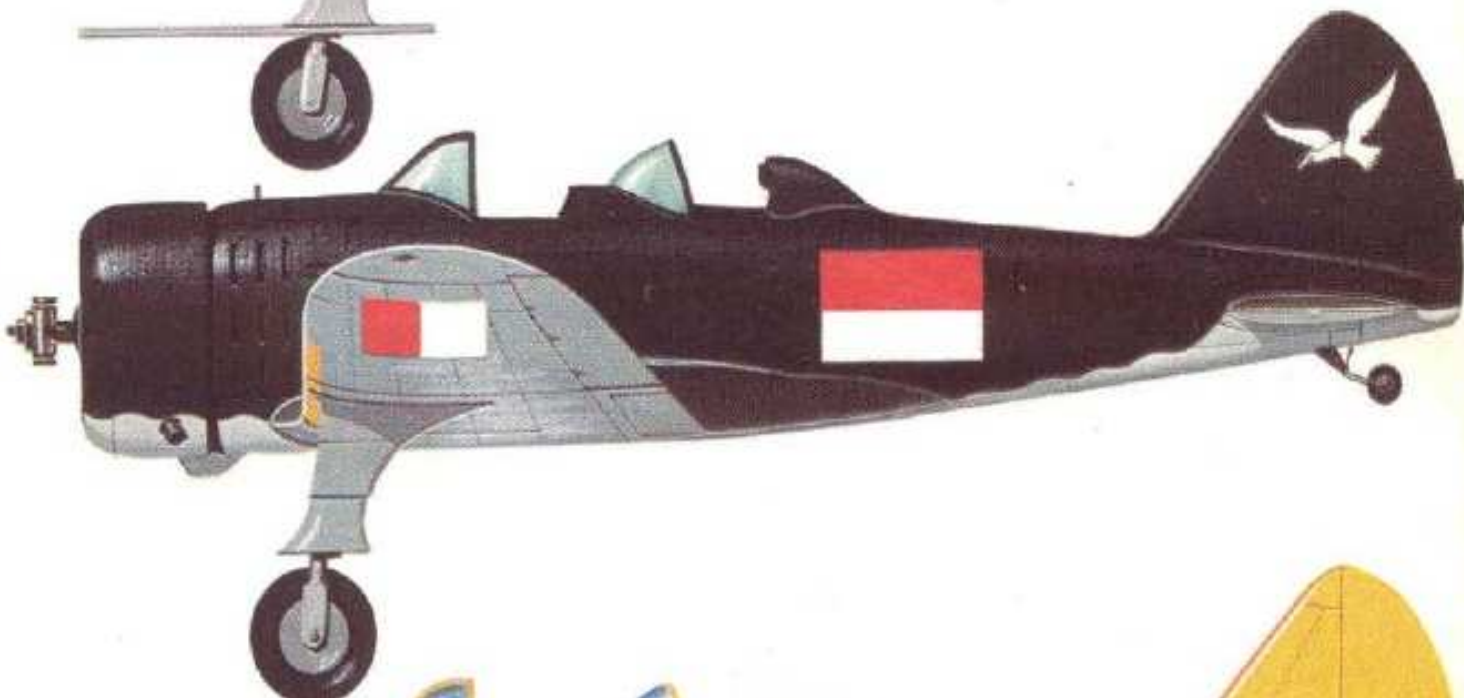
1
Manshu Ki.79b, Flight Training Company,
Mukden, Manchoukuo, August 1945.



2
Manshu Ki.79b, Unidentified Flight Training
Company, Spring 1945.



3
Manshu Ki.79b, Indonesian People's Security
Force. Known as the Nishikoren this was the
first aircraft type assembled and flown by the
IPSP. Note the mythical Garuda eagle on the
fin and rudder which later appeared on the
Indonesian State Seal.



4A
Red Army of China Air Force. Insignia used
from October 1945 to July 1946, then adopted
by People's Liberation Army Air Force, July
1946 to 1950.



4
Manshu Ki.79b, Red Army of China Air Force.



5A
People's Liberation Army Air Force 1950-.

5
Manshu Ki.79b, People's Liberation Army Air
Force, Air Academy, Sian, China, 1951.



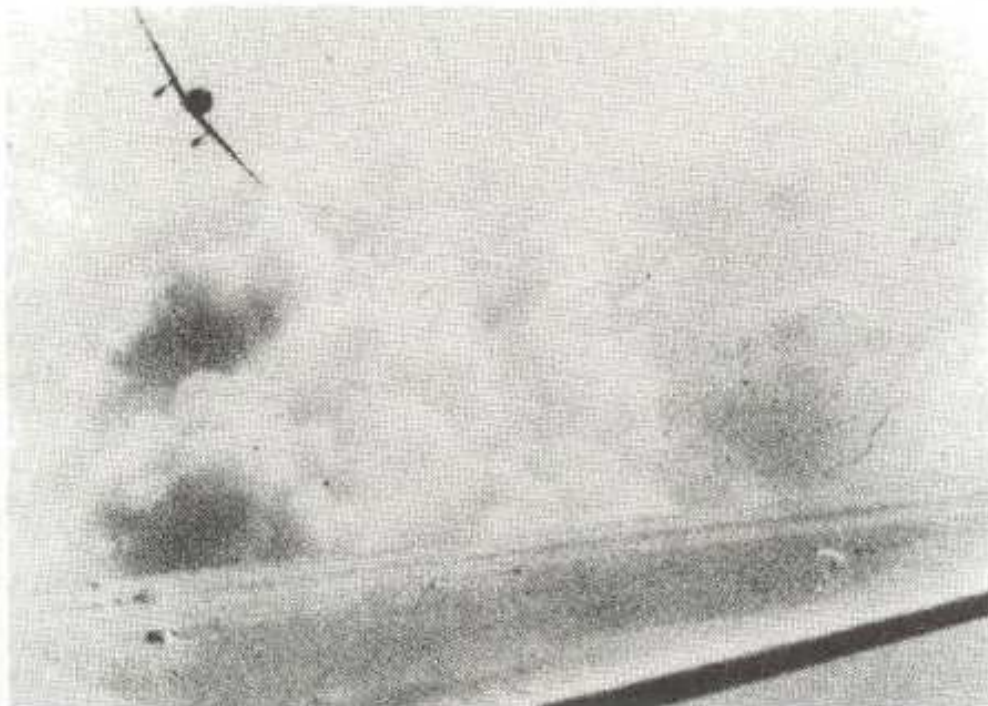
© WARD



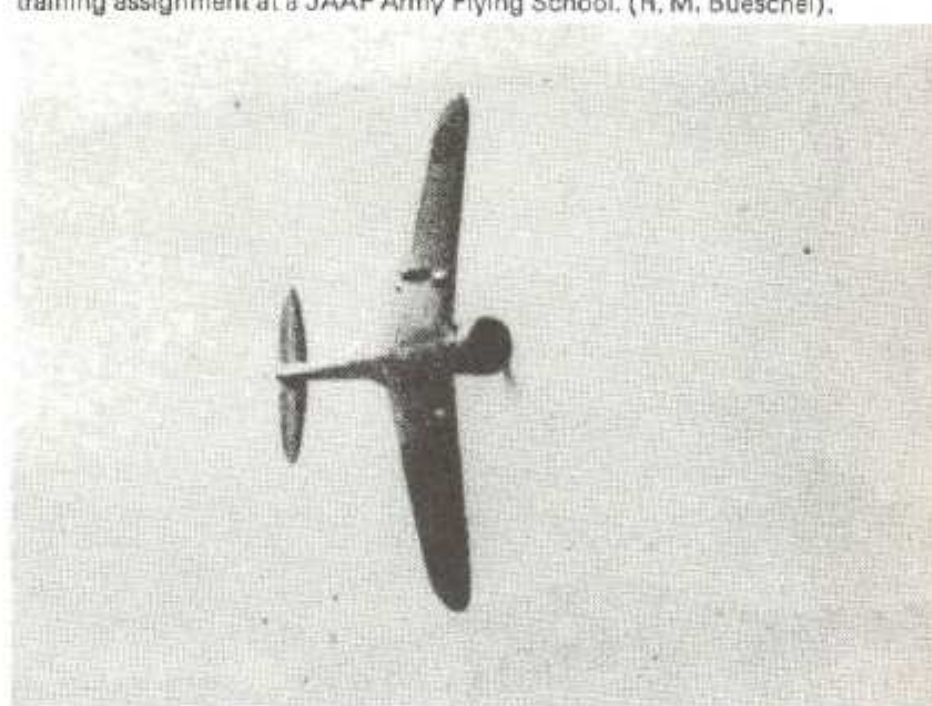
Above: Three Type 97's on the trail of a Ki.21 Heavy Bomber. (R. M. Bueschel).



Above: The interception of a bomber by a Type 97 Fighter as a training assignment at a JAAF Army Flying School. (R. M. Bueschel).



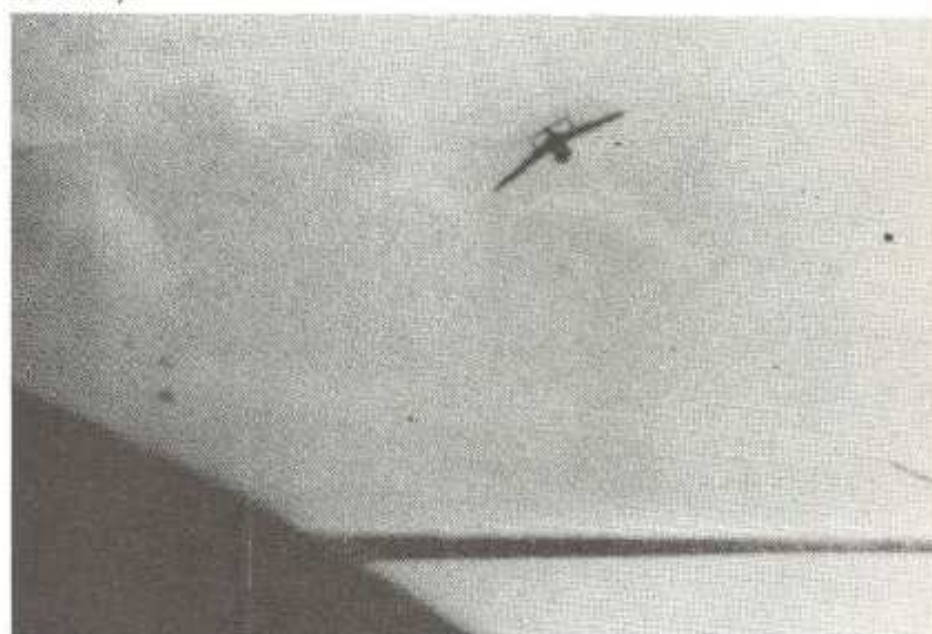
Above: Photos of interception were taken from the Type 97 "Sally" bomber. (R. M. Bueschel).



Above: Banking away after a successful interception. (R. M. Bueschel).



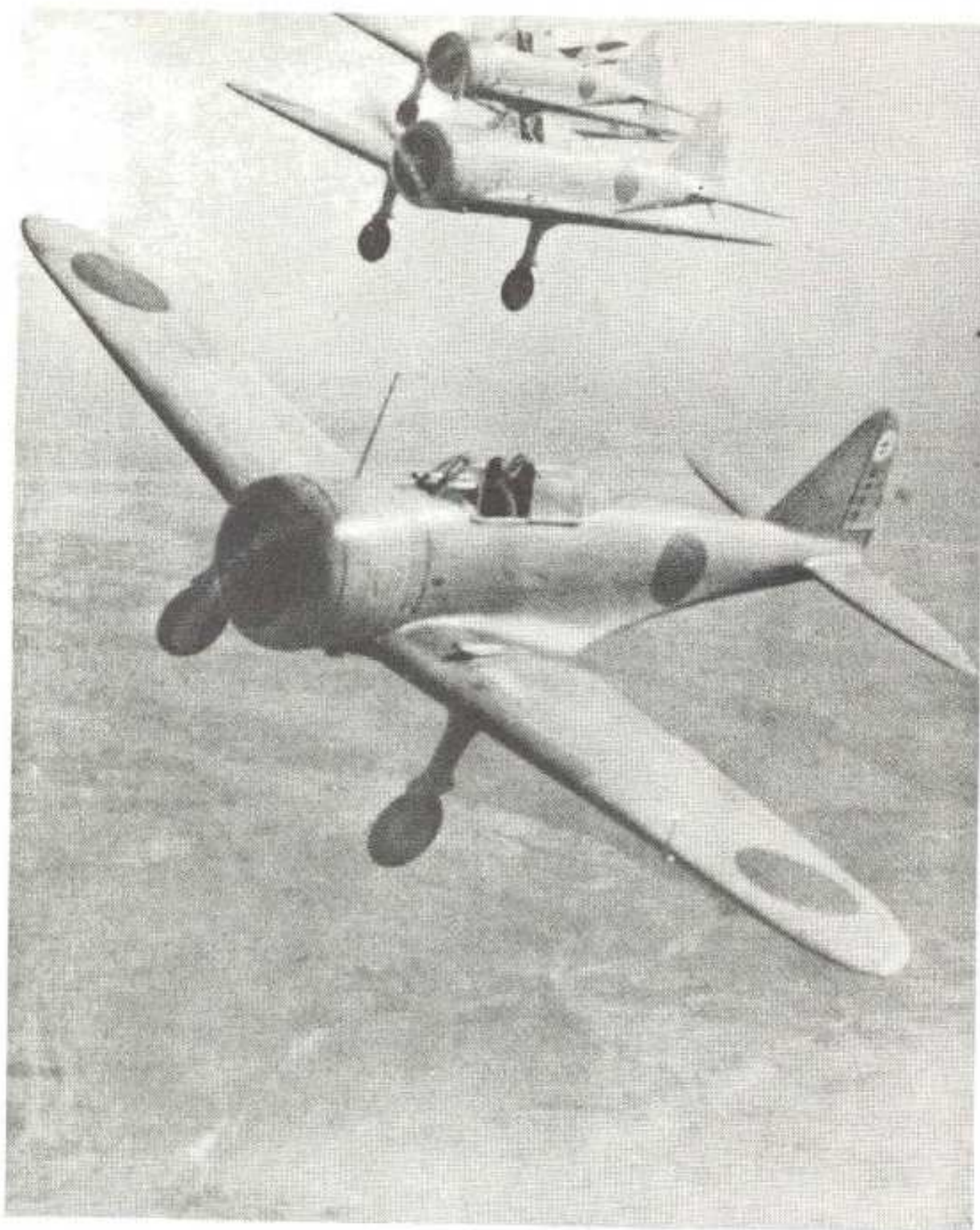
Above: Moving in rapidly. (R. M. Bueschel).



Above: Closing in for the "kill". (R. M. Bueschel).

Right: One of the Ki.27b-Kai trainers of the Army Air Academy flies past Mt. Fuji on a training mission. Distinctive red "winged aircraft" insignia is on a white disc. (Koku Asahi via Bueschel).

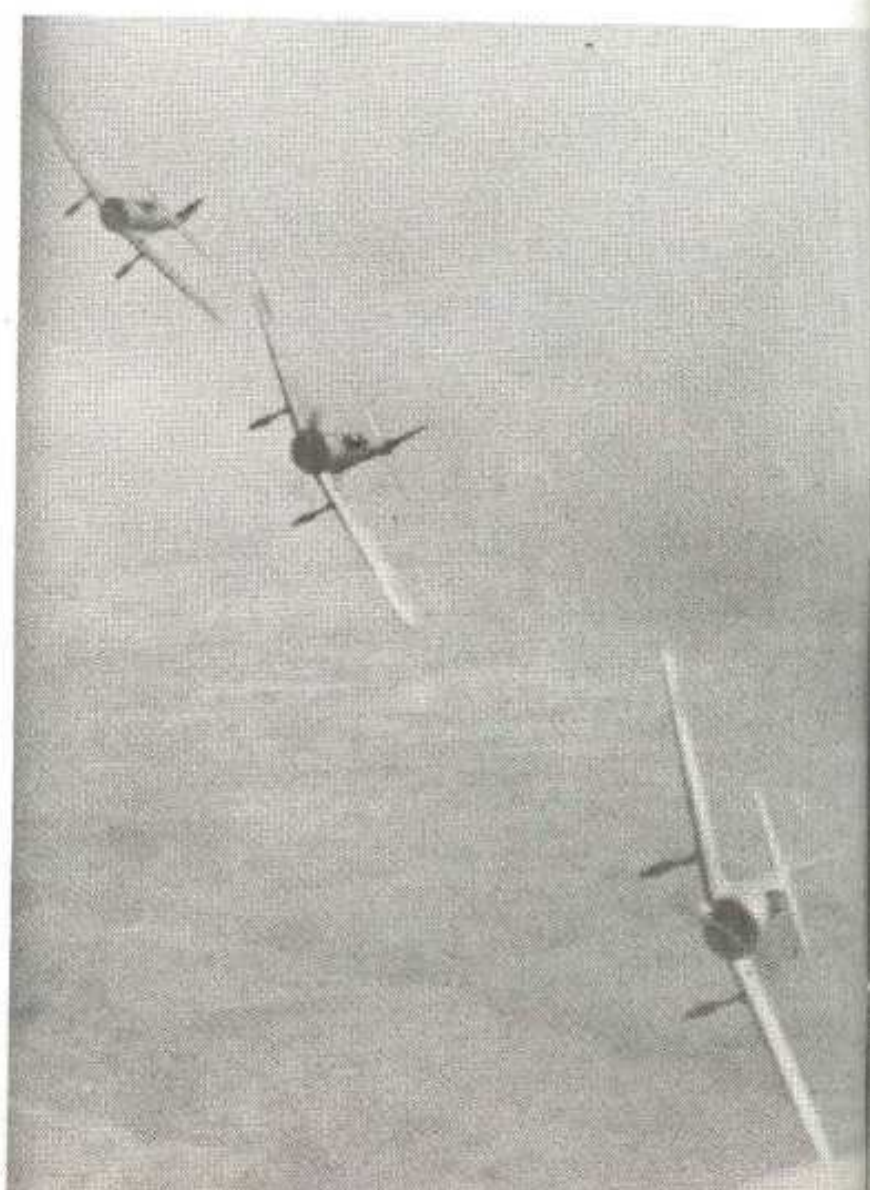
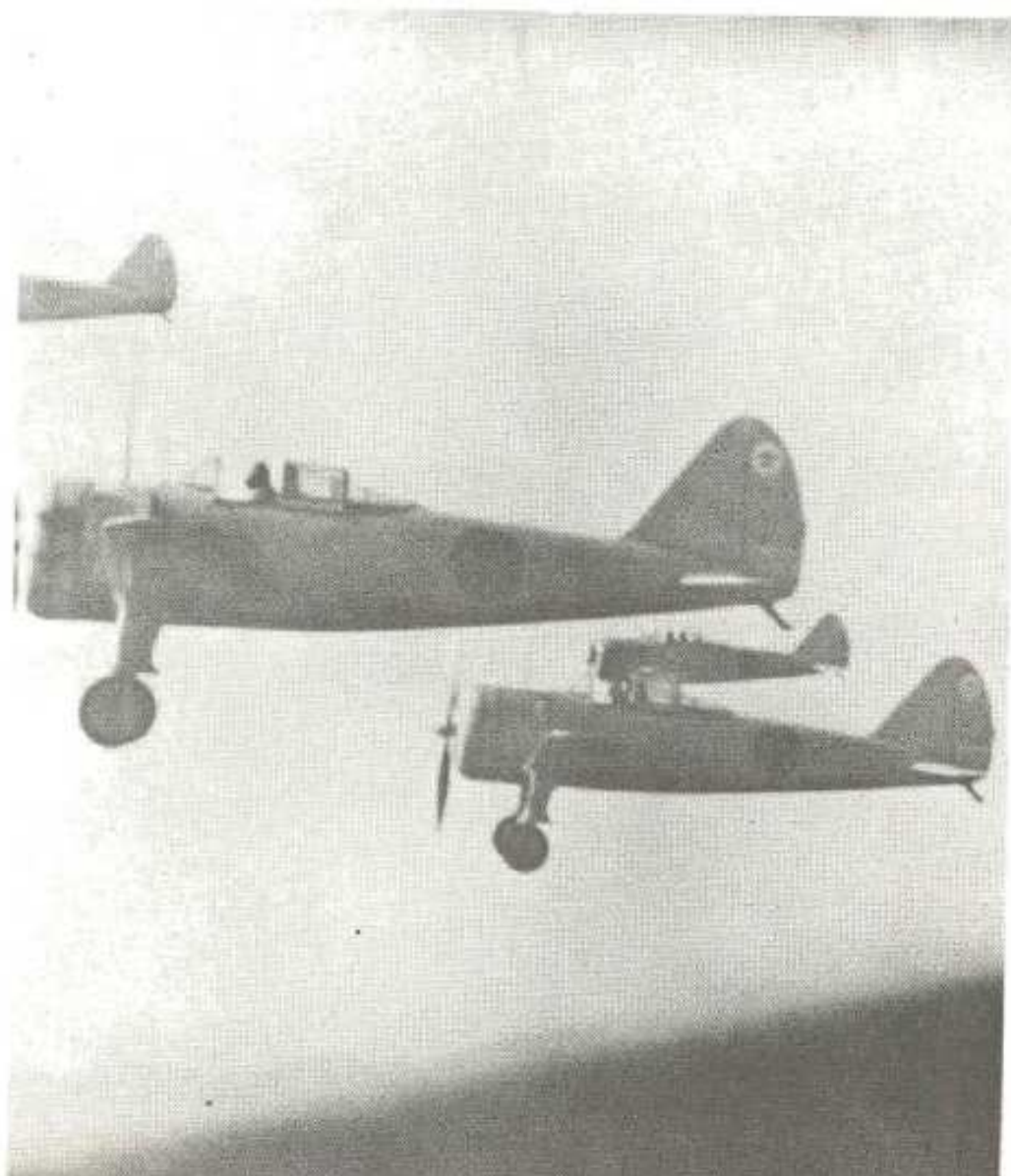


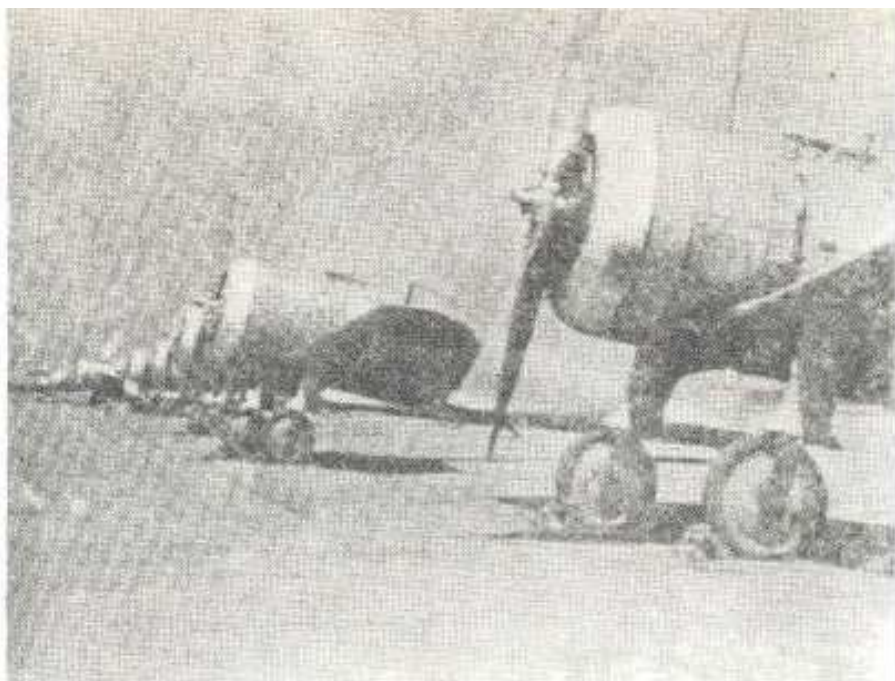


Left: Student pilots fly their Ki.27b-Kai advanced fighter trainers in formation in Japan in January 1943. (Koku Asahi via Bueschel).

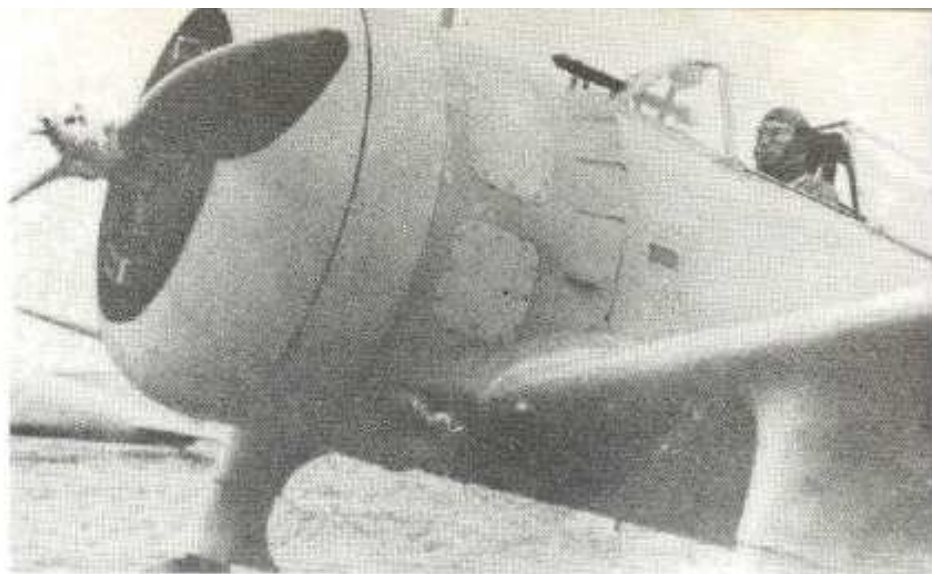
Below, left: Both school sites of the Army Air Academy in Japan and Manchoukuo flew modified Ki.27b-Kai trainers during the Pacific War period. (Koku Asahi via Bueschel).

Below: A group of "Nate" training models from the Army Air Academy flying over Japan in December 1942. (Koku Asahi via Bueschel).





Above: Line-up of Ki.27a-Kai trainers at Akeno, (Koku Shonen via Bueschel).



Above: Pilot training at Akeno, March 1942. (Koku Jidai via Bueschel).



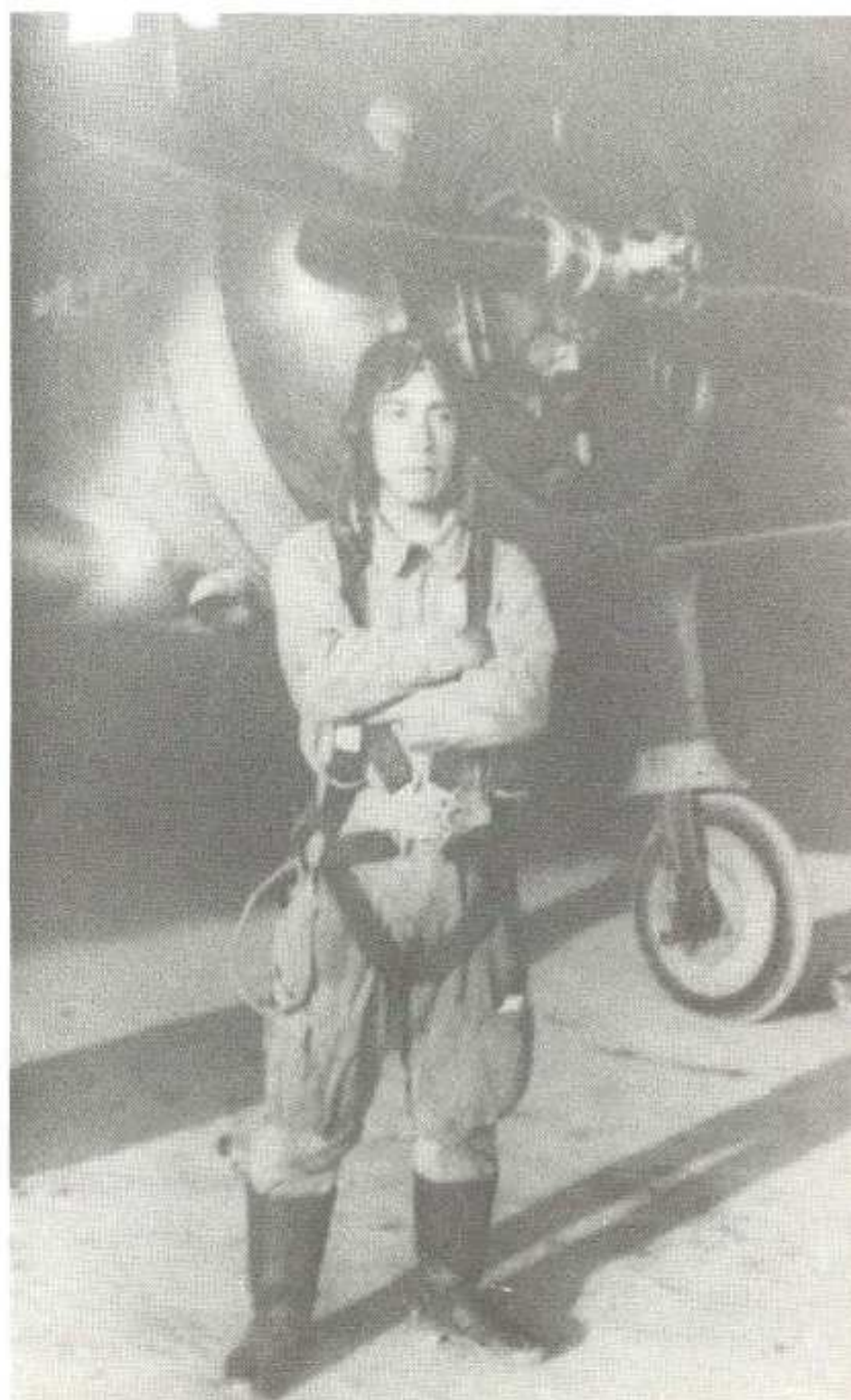
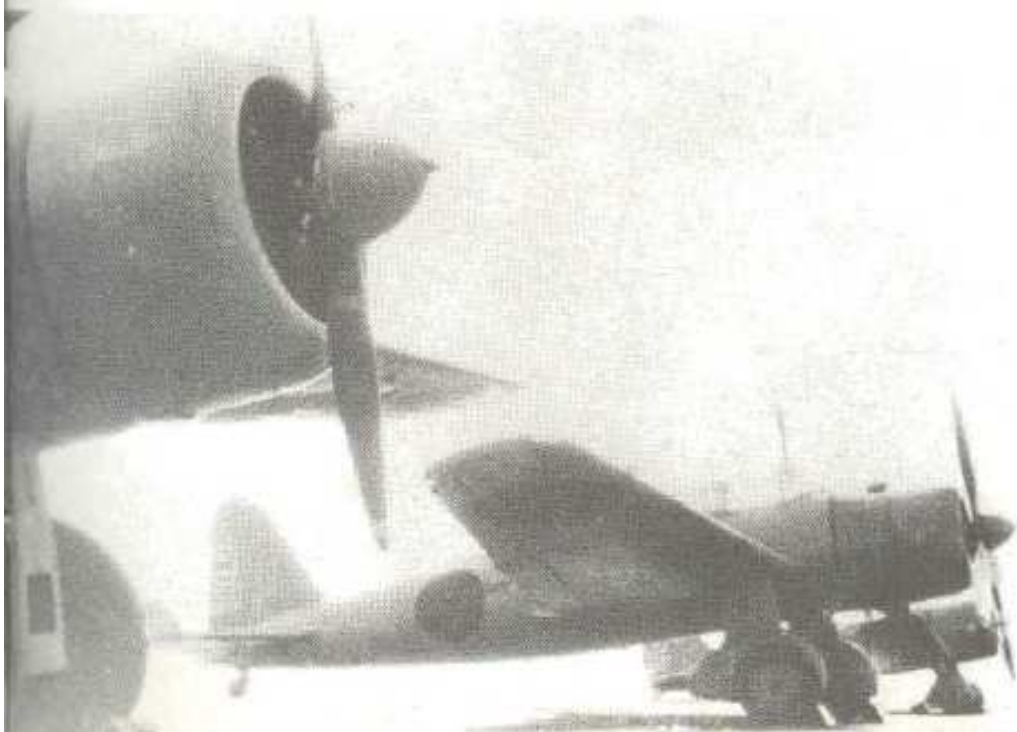
Above: Ki.27b-Kai Trainer version, at Akeno Flying School, via R. Mikesh.



Above: The Ki.27b-Kai had parts and armament removed. (Sekai-no-Kokuki via Bueschel).

Right: Aviation Cadet Hideaki Inayama, one of the JAAF's leading surviving "Aces", at Akeno with his Ki.27b-Kai in the summer of 1943. (H. Inayama via Bueschel).

Below: Line-up of advanced conversion trainers at Kumagaya in 1942 includes, left to right: Ki.48 Light Bomber, Ki.30 Light Bomber and Ki.27b Fighter. (H. Ando via Bueschel).





Left: The Ki.27a was modified for trainer use as the Ki.27a-Kai by removing the armament and wheel parts. The fuselage tail cone was frequently also removed. School markings are of the Kumagaya Army Flying School. (S. Abe via Bueschel).



Left: Prime fighter condition Ki.27b "Nate" at the Student Company of the Kumagaya Army Flying School in 1942 used for transitional Army fighter training. (S. Tachibana via Bueschel).

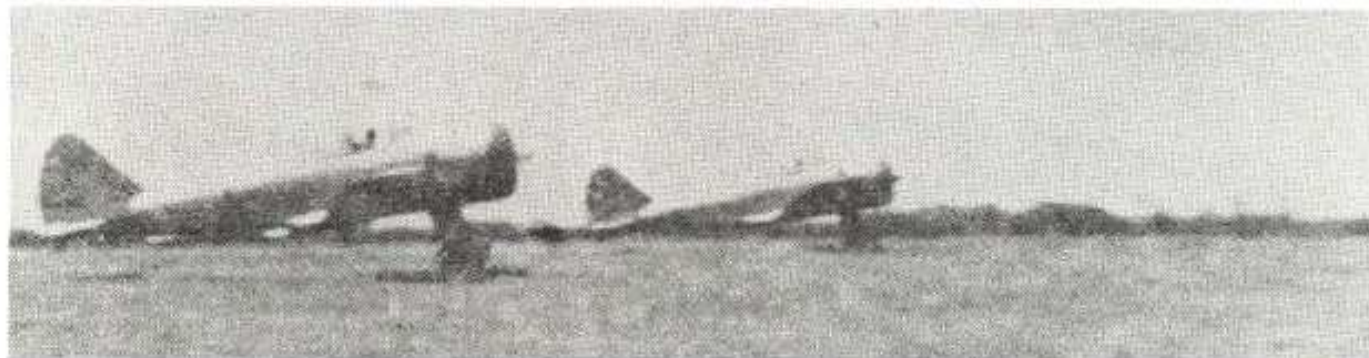
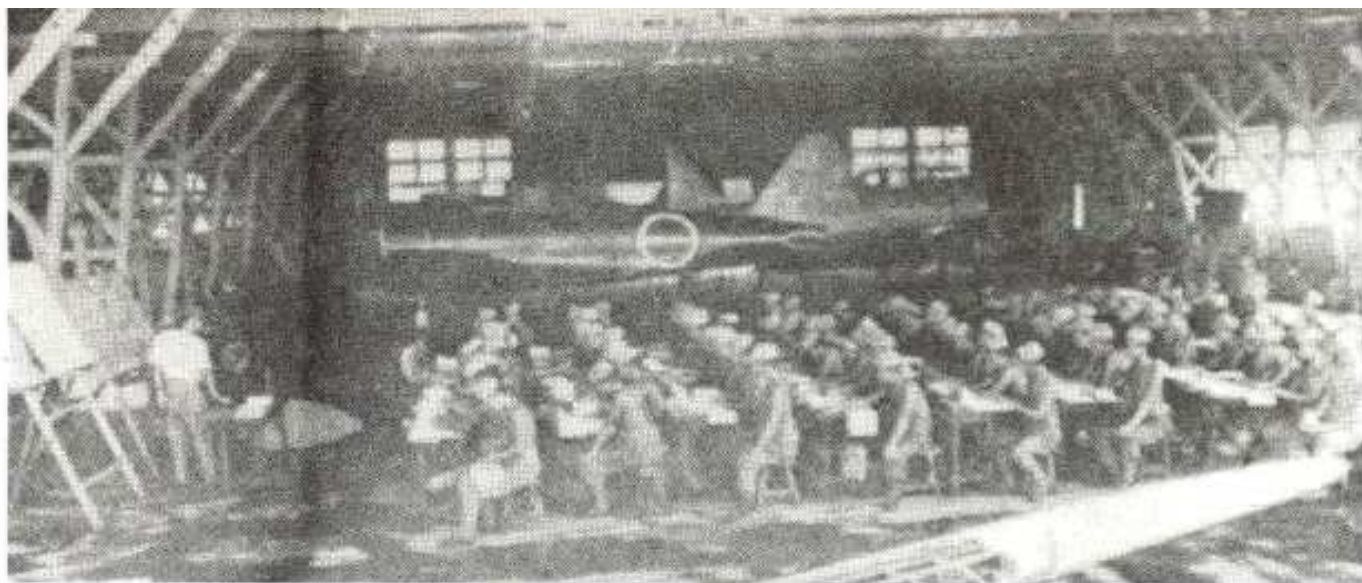


Above: When the Army Aviation Maintenance School at Tokorozawa was reformed as the Tokorozawa Army Aviation Maintenance School in June 1943, at a time when other schools were opened, the Ki.27b-Kai remained on hand for maintenance training. These are "Nates" at the school in August, 1943. (Shashin Shuho via Bueschel).



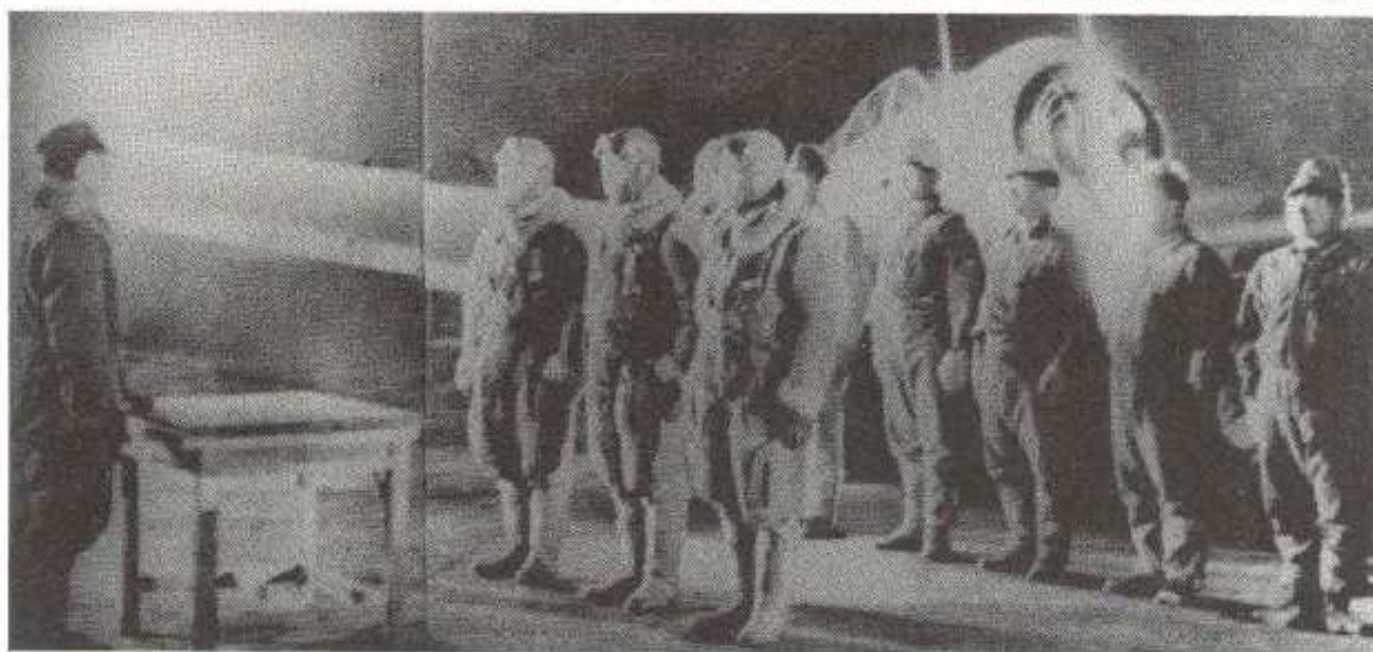
Left: Maintenance training on Ki.27b-Kai training aircraft at Tokorozawa, September 1943. (Shashin Shuho via Bueschel).

Right: Lecture hall sessions on maintenance at Tokorozawa, September 1943—camouflaged Ki.27b-Kai in background. (Shashin Shuho via Bueschel).



Left: Frequently re-built Ki.27a-Kai maintenance trainers take-off at Tokorozawa, summer 1942. (Koku Asahi via Bueschel).

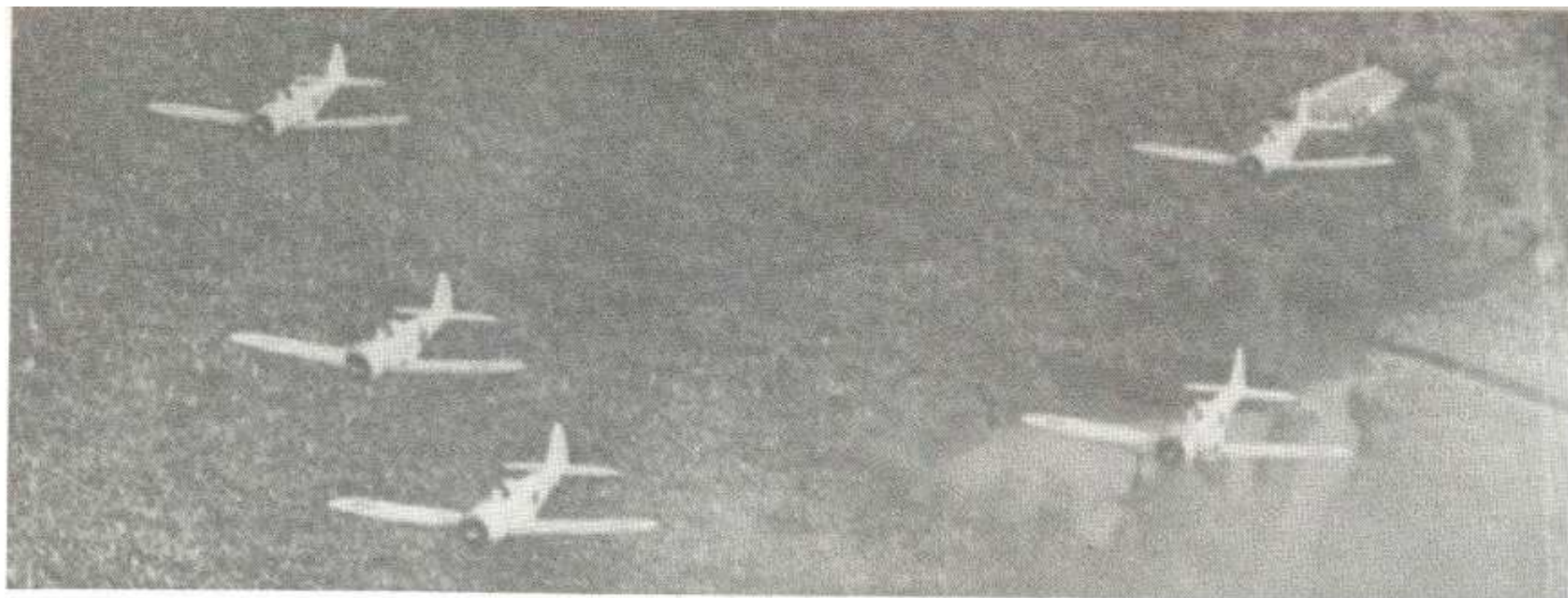
Right: Aviation cadets march to their Ki.27b-Kai aircraft at double-time, spring 1942, at the Tachiarai Army Flying School. (Koku Asahi via Bueschel).



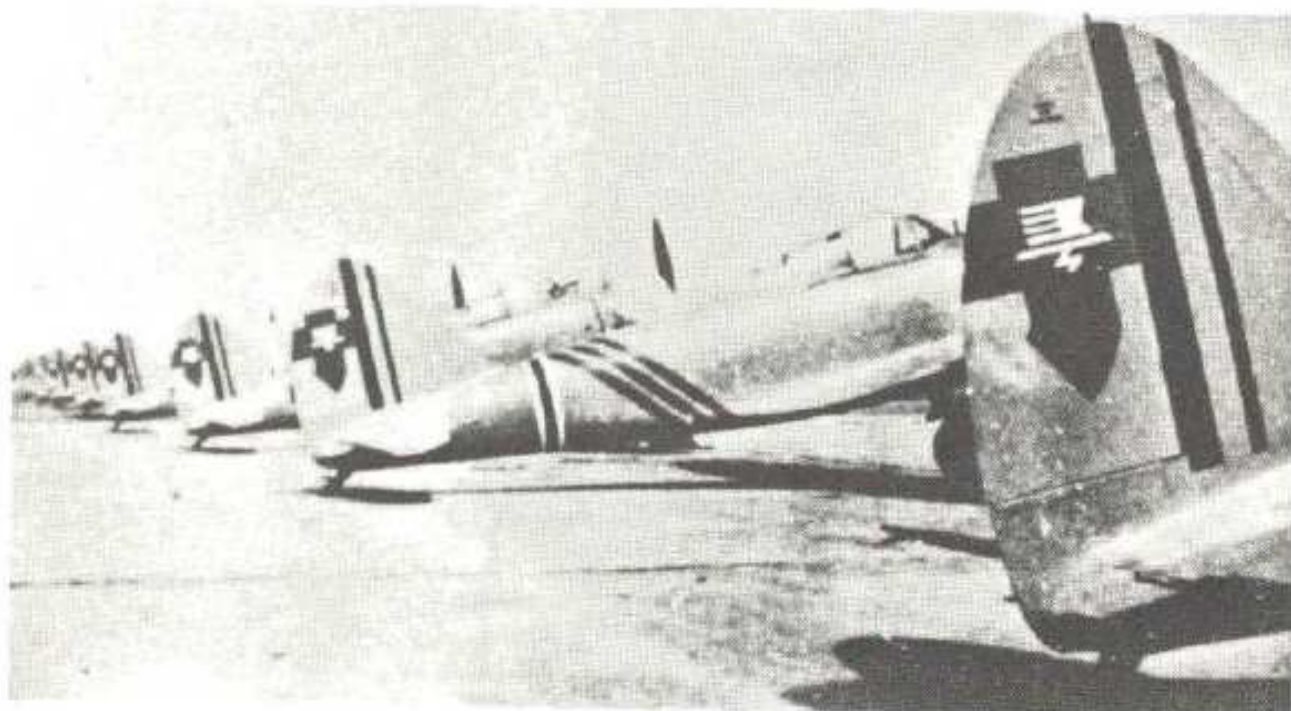
Left: Night fighter training at a JAAF school early in 1942. (Shashin Shuho via Bueschel).

Right: Night fighter proficiency had been neglected in the JAAF until the coming of the Pacific War and the possibility of attacks against Japan. This training is in early February 1942, prior to the Doolittle Raid in April. (Shashin Shuho via Bueschel).



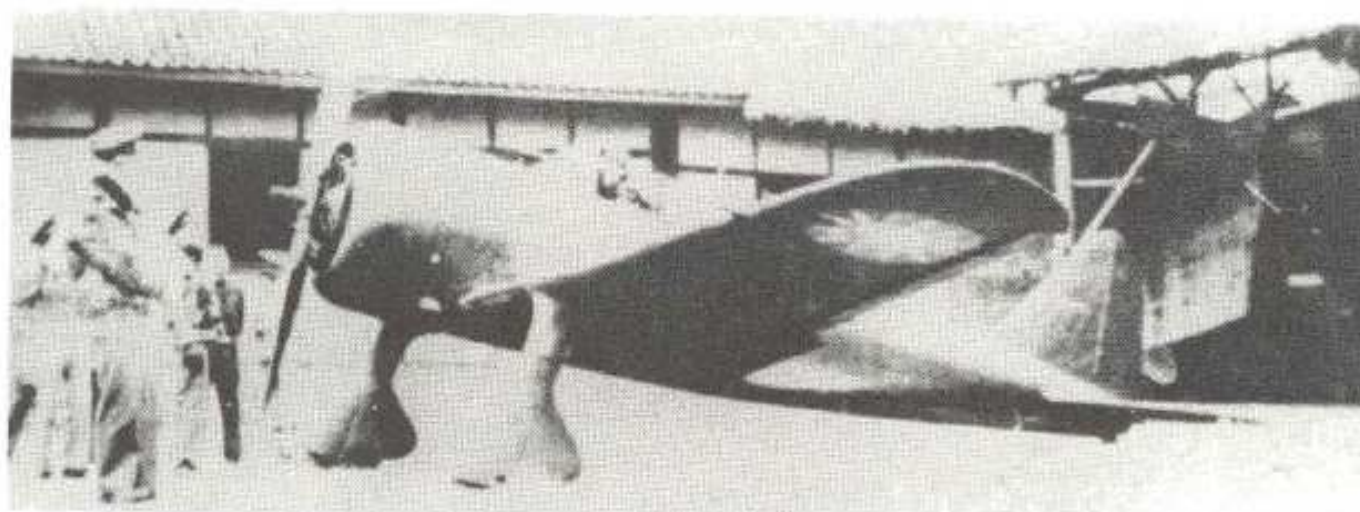


Above: Modified Ki.27b-Kai aircraft used as trainers fly in formation over the Japanese countryside adjacent to their flight training school. Time is around late 1942. (Warren D. Shipp via Bueschel).



Left: Ki.27b-Kai trainer versions at Akeno. (R. Mikesh via Bueschel).

Below: "Flying Tiger" pilots of the A.V.G. in China check out a Ki.27b fighter in Nationalist Chinese camouflage and markings in 1942. Claire Lee Chennault, leader of the group, sent complete data on the fighter back to Washington prior to Pearl Harbor where it was "lost" in the files. (Gregory Kohn via Bueschel).

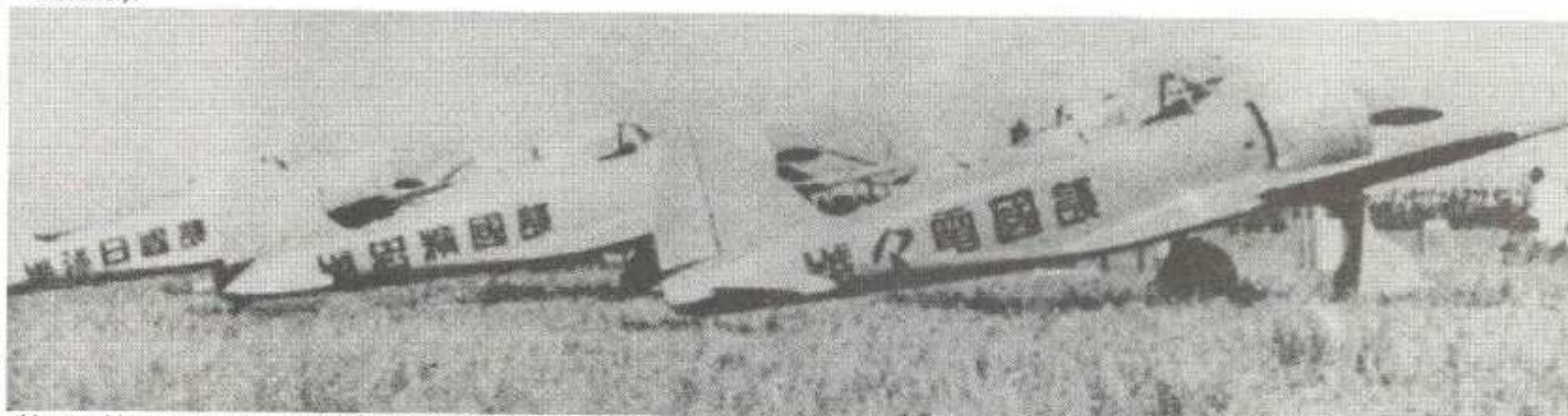


Below: The clean lines of the Type 97 Fighter, shown here in Chinese Nationalist markings as the P- (for "Pursuit") 5015, were very advanced for their day, although the type was obsolete when the Pacific War began. (USAAF photo via Bueschel).





Above: When the revitalized Manchoukuoan Air Force was revealed to the public on Air Force Day, September 20th, 1942, the Nakajima Ki.27b was its standard fighter. This example is one of those assigned to the "Defence of the Homeland—Anto" Fighter Company. (Koku Asahi via Bueschel).

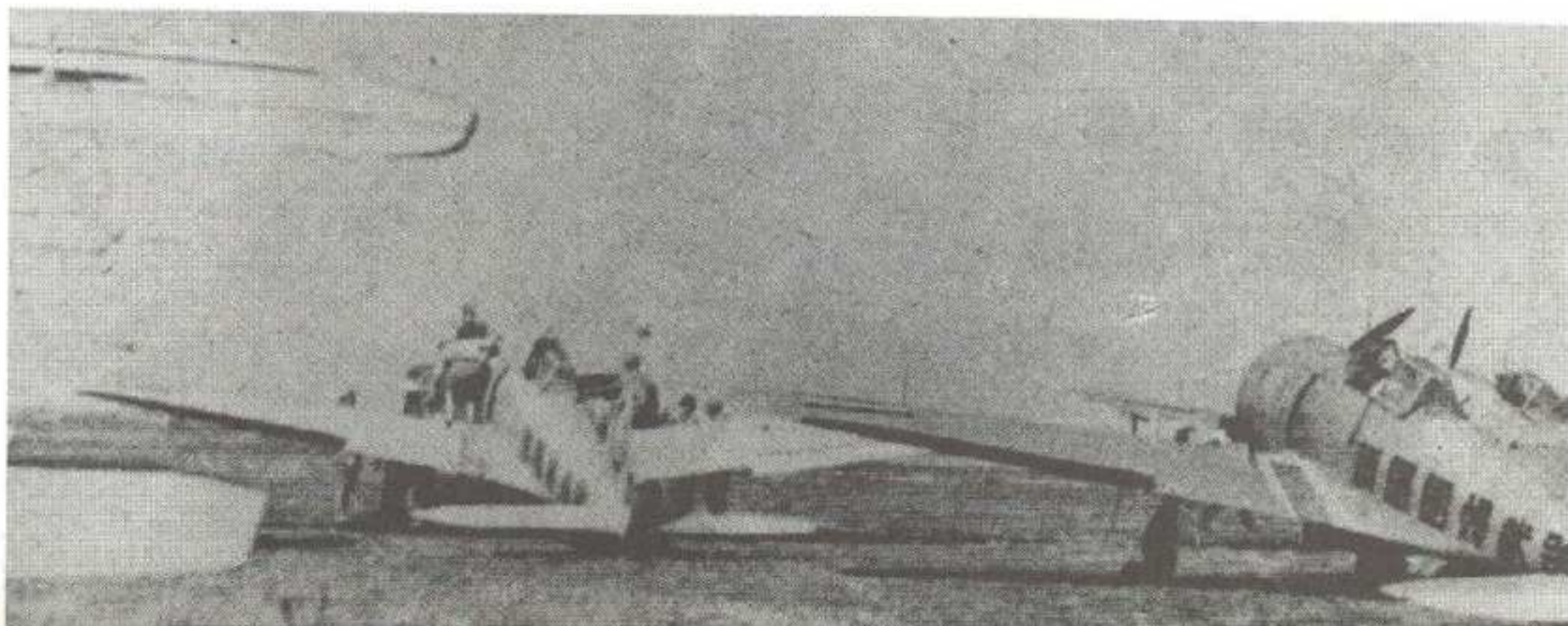


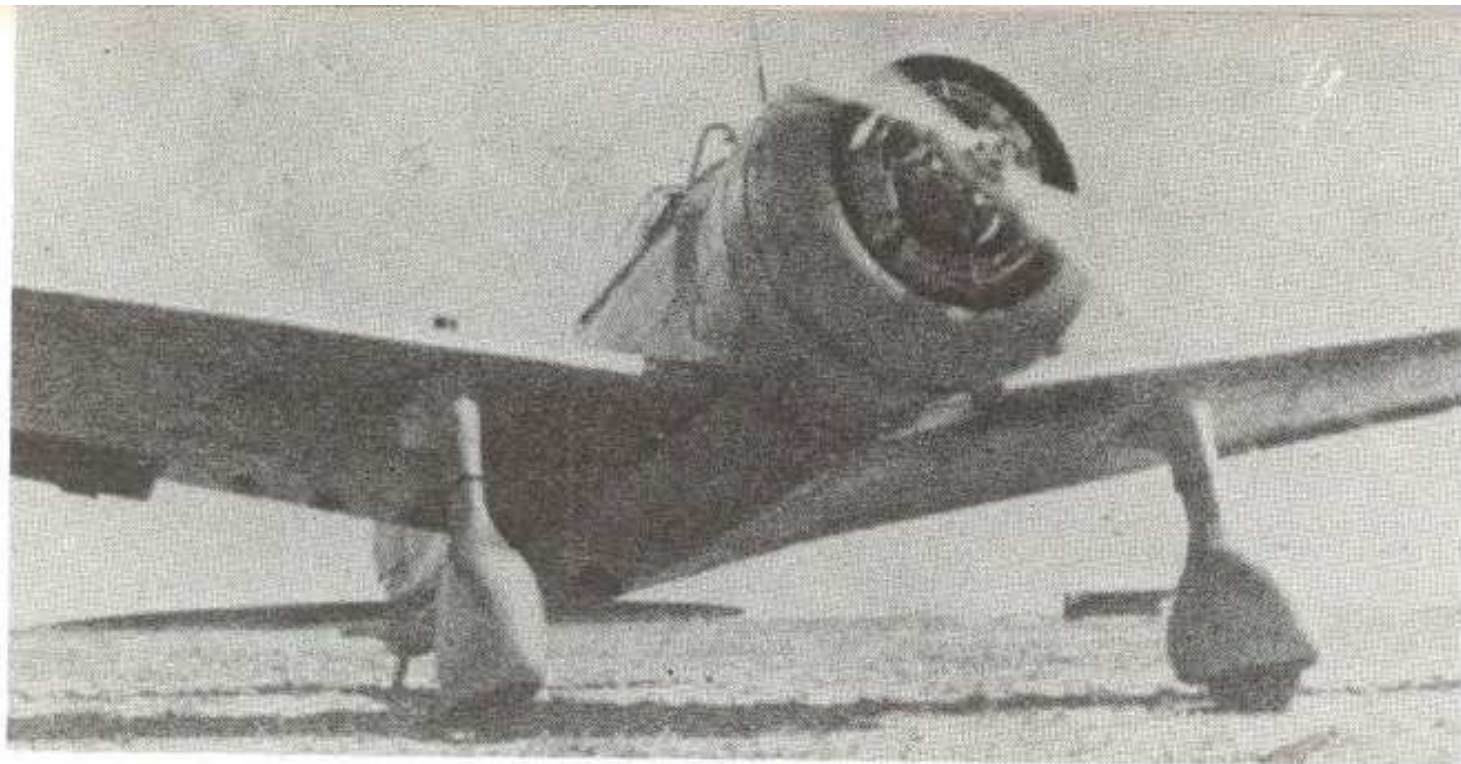
Above: Line-up of the new Manchoukuo Ki.27b fighters in September 1942 shows three examples purchased with funds collected from the Manchoukuoan public to purchase aircraft for their own defence. (Hiko-Nippon via Bueschel).



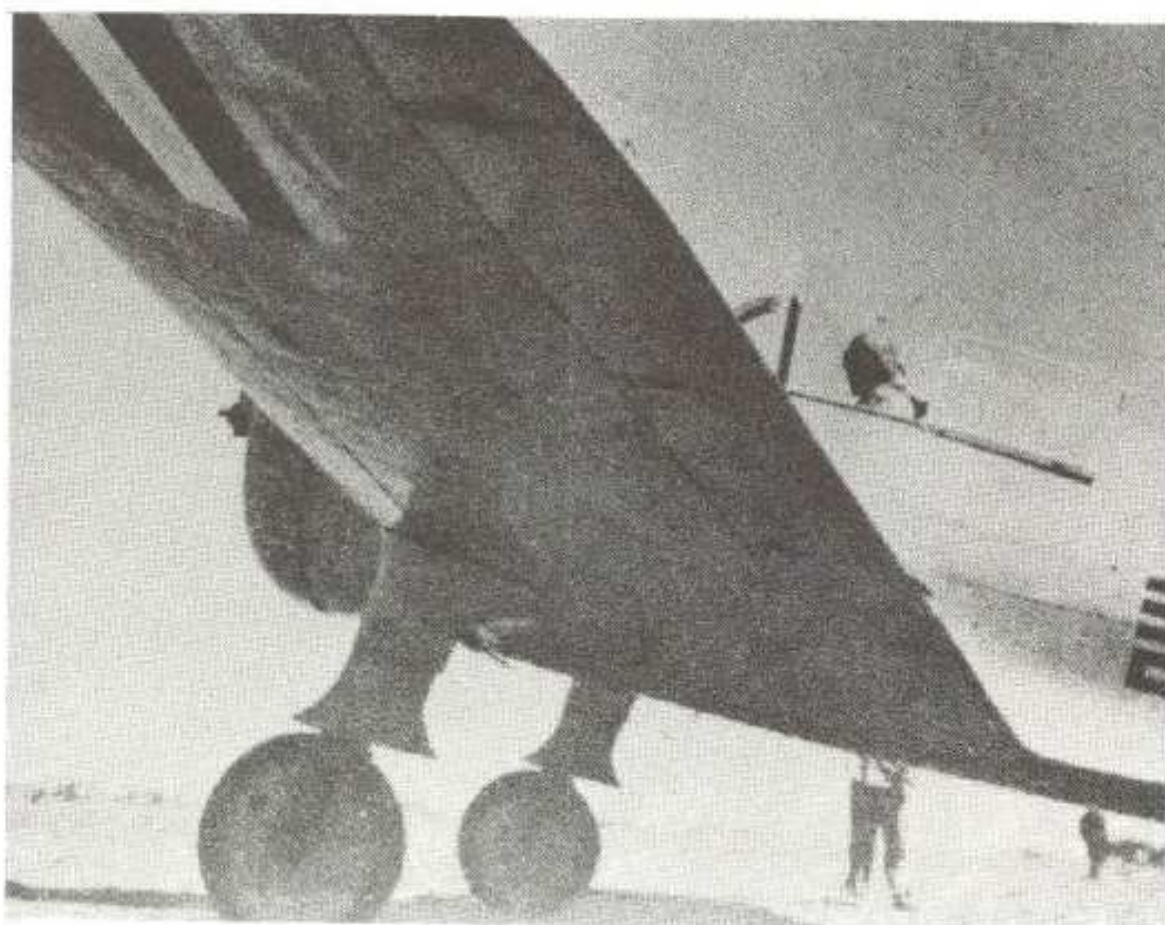
Right: Inscription along fuselage is "Defence of the Homeland—Anto No. 4." Anto was one of the geographic entities that made up the Empire of Manchoukuo. Citizens from this area contributed the funds to purchase this aircraft. (Koku Asahi via Bueschel).

Below: Fighters of the Air Force that never fought. The Manchoukuoan Air Force survived as a propaganda entity, but by 1944 the Manchoukuoan pilots were being drafted into Japanese Army service to fly JAAF aircraft. (Koku Asahi via Bueschel).





Above: A Type 97 Fighter of the MAF warms up. Location is at Mukden, in Manchoukuo. (Koku Asahi via Bueschel).

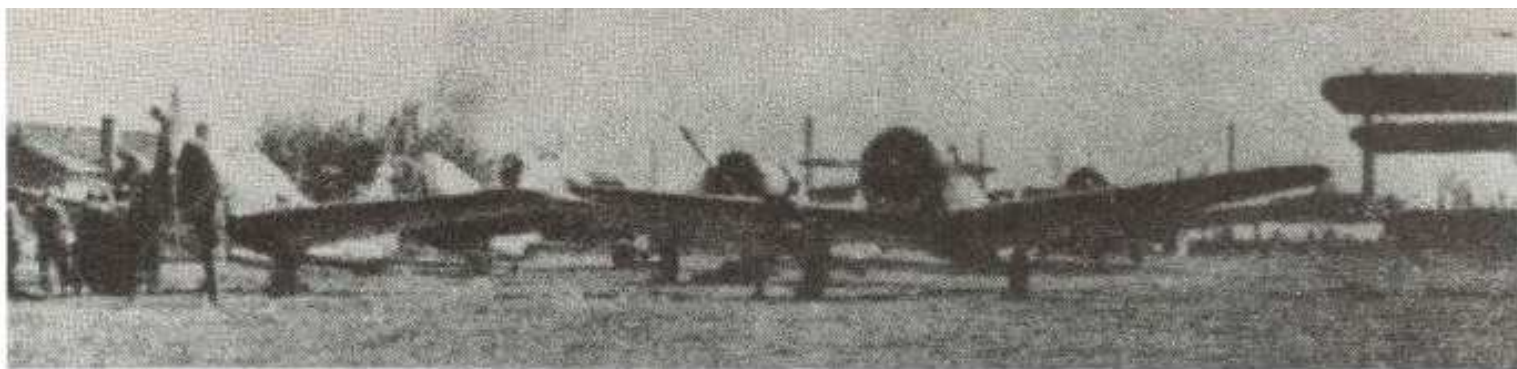


Below: Manchoukuoan pilots and mechanics inspect one of their new Ki.27b fighters in September 1942. The unique Type 97 Fighter auxiliary drop tanks are shown to good advantage here. (Koku Asahi via Bueschel).

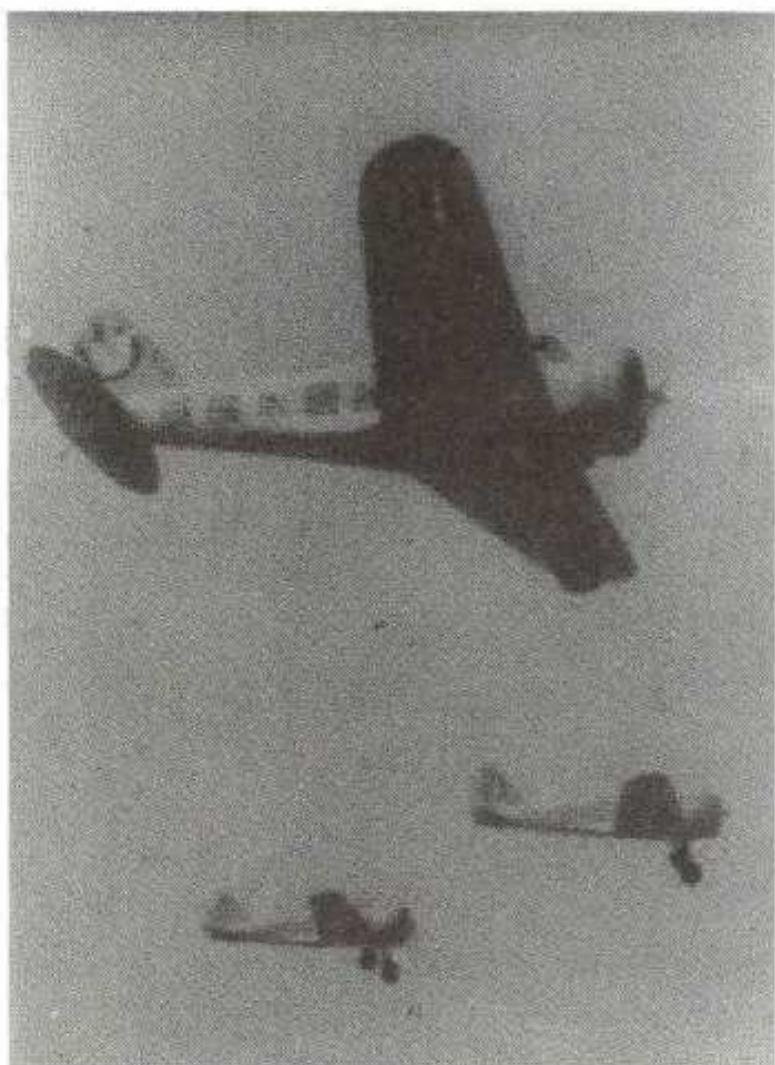
Above: Wing under side view shows colourful Manchoukuo insignia off to good advantage. The five colours denote the five races making up the Manchoukuoan population with the yellow half-circle for Manchu accounting for half. (Koku Asahi via Bueschel).

Below: A Manchu mechanic starts up one of the MAF Ki.27b Fighters. (Koku Asahi via Bueschel).





Above: A line-up and display of the Ki.27a Fighters of the new Manchoukuoan Air Force. (Koku Asahi via Bueschel).



Above: Manchoukuo Air Force Day was September 20th, and was celebrated in 1942, with a MAF Nakajima-Fokker Super-Universal in foreground, Ki.27b Fighters in background. (Koku Asahi via Bueschel).

Left: The Ki.27b was still in Manchoukuoan service in the summer of 1944, only now they were used primarily as conversion trainers to supply Manchu pilots for JAAF use. MAF unit markings can be seen on the vertical tail. By this time the Manchoukuoan Air Force was a useless, debilitated force. It would crumble before the Soviet invasion the following year. (Asahigraph via Bueschel).

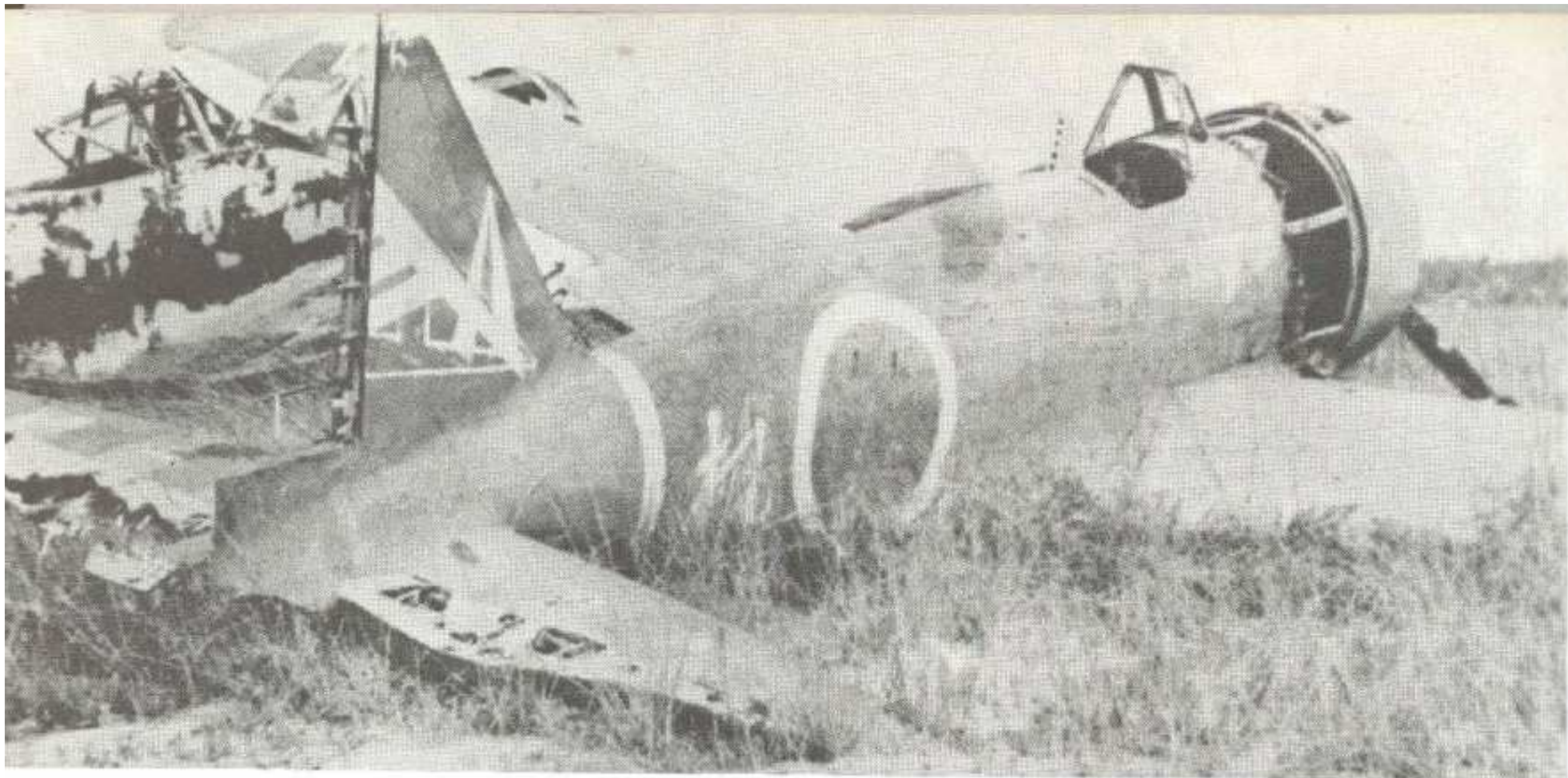
Right: Built on former Ki.27 Type 97 Fighter jigs, the Manshu Ki.79a Type 2 Advanced Trainer made use of a stable air frame to provide the JAAF with a reliable trainer at low development cost in time and money. Production was in Manchoukuo. (S. Tachibana via Bueschel).



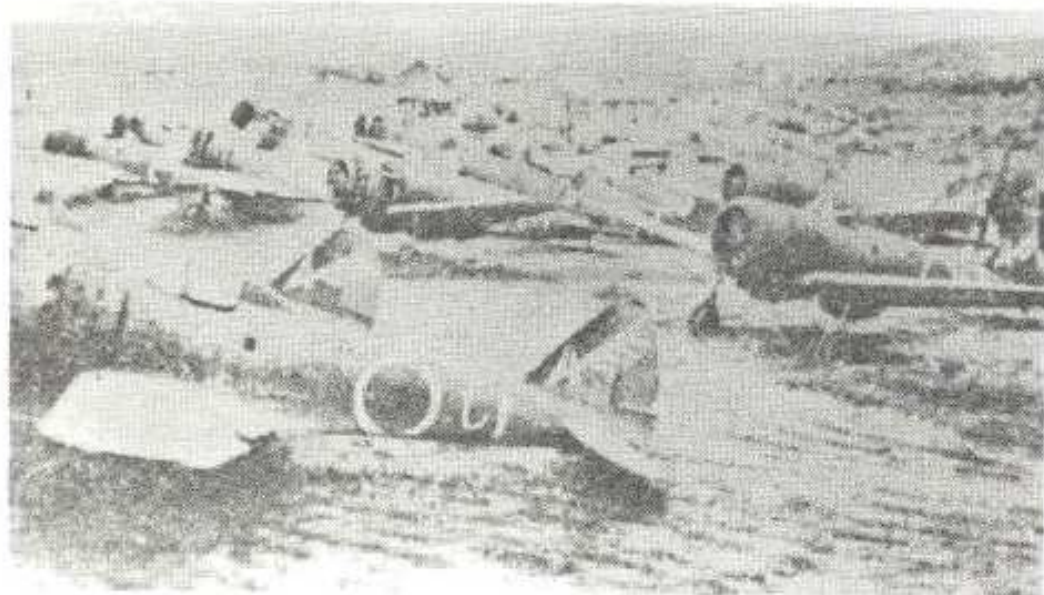
Below, right: Manchoukuoan pilots received the Ki.27b at a time that the JAAF was being re-equipped with the Ki.43 Hayabusa. (Hiko-Nippon via Bueschel).

Below, left: Manshu Ki.79 trainers were often assigned to JAAF Regiments to provide continuing proficiency training for green pilots. This Ki.79a was found at Palawan in the Philippines by invading American forces in November 1944. (USAAF photo via Bueschel).





Above: Manshu Ki.79 trainers were scattered all over the Japanese Empire when the war ended. This Ki.79a example from an unidentified Flight Training Company was at Kallang Airport, Singapore. It shows evidence of at least two different unit markings. (F. D. Price via Bueschel).



Left: Junk pile of Manshu Ki.79a single-seat trainers reveals same markings as that found at Singapore. After the war these aircraft were destroyed in droves. (R. M. Bueschel).

Below: This is what the Russians found when they reached Mukden in Manchoukuo in the second week of August, 1945. Foreground is a Manshu Ki.79b two-seat trainer with Ki.79a and Ki.55 trainers in the background. (D. J. Voaden via Bueschel).



Below both pictures: Not as widely used as the two-seat version, the single-seat Ki.79a Type 2 Advanced Trainer was still produced in numbers by Manshu in Manchoukuo. These are examples captured by the Russians in August 1945 and made available in scores to the Chinese Communists by the Soviets as the Chinese fanned into Manchuria in October 1945.





Above: The first aircraft assembled and flown by the Indonesian People's Security Force early in 1945 was a former JAAF Manshu Ki.79b trainer left in a dump at Djakarta. It entered Indonesian service as the Nishikoren, marked with the mythical Garuda eagle that later appeared on the Indonesian state seal. Photo shows Second Generation Indonesian markings which overpainted the former Japanese insignia. (R. Bueschel).



Right: Two Ki.79b trainers of the Indonesian insurgent air force straddling an Indonesian Douglas DC-3 on the island of Sumatra, summer 1947. (via Bueschel).

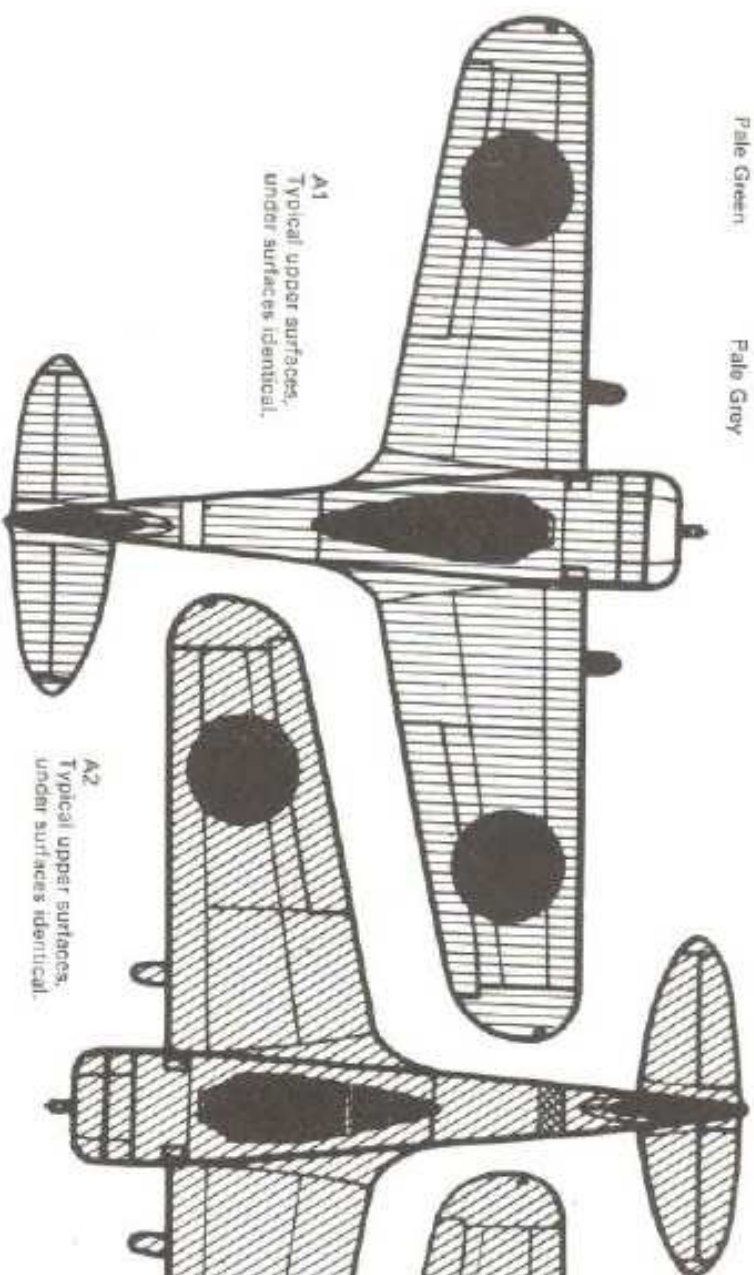
Below: Former JAAF Ki.79b trainer taken over by the Red Army of China in Manchuria refitted and ready for use as a Communist Chinese advanced trainer, March 1946. (PLA Journal via Bueschel).



|||||
Pale Green

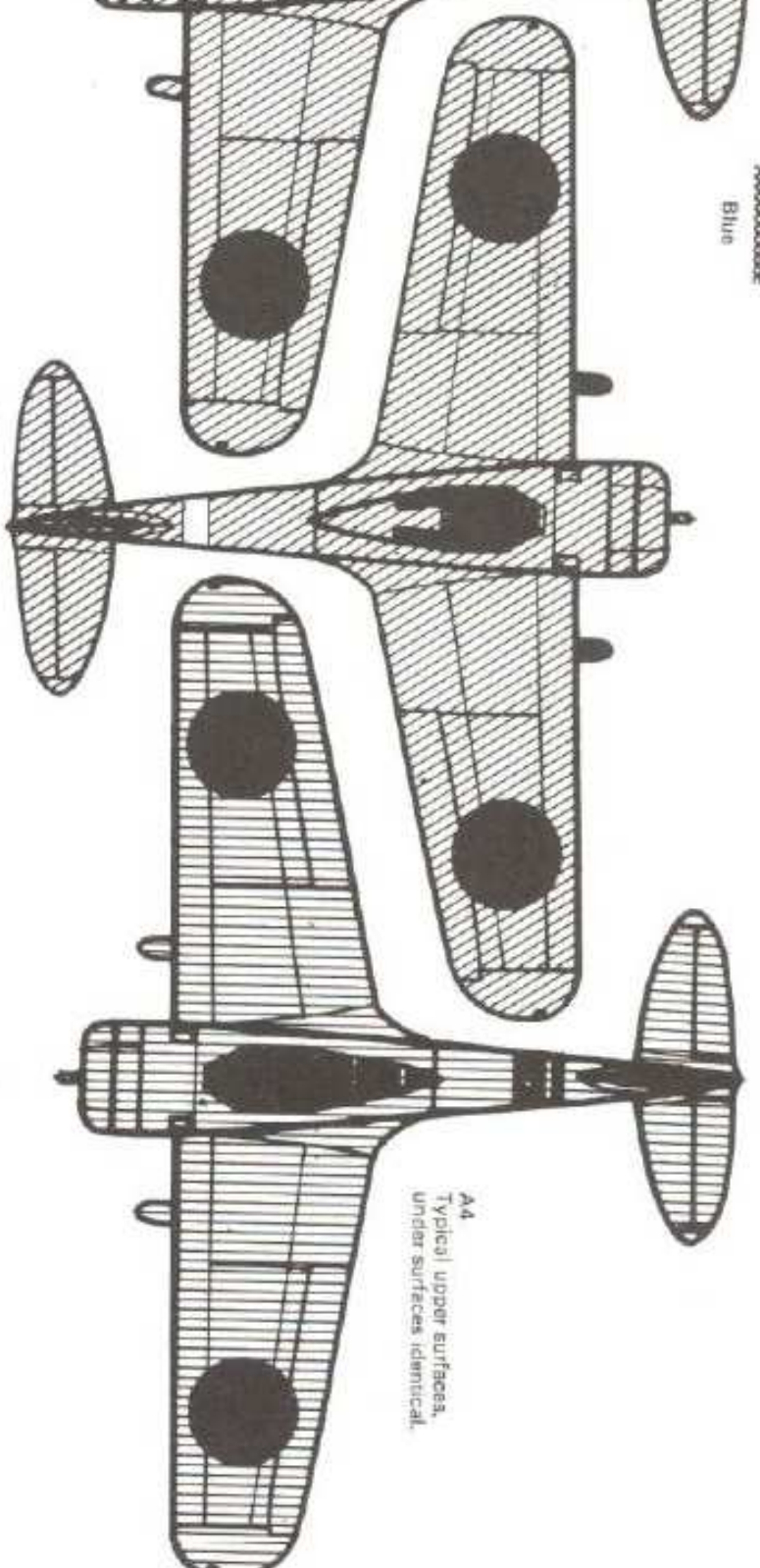
|||||
Pale Grey

|||||
Blue



A1
Typical upper surfaces,
under surfaces identical.

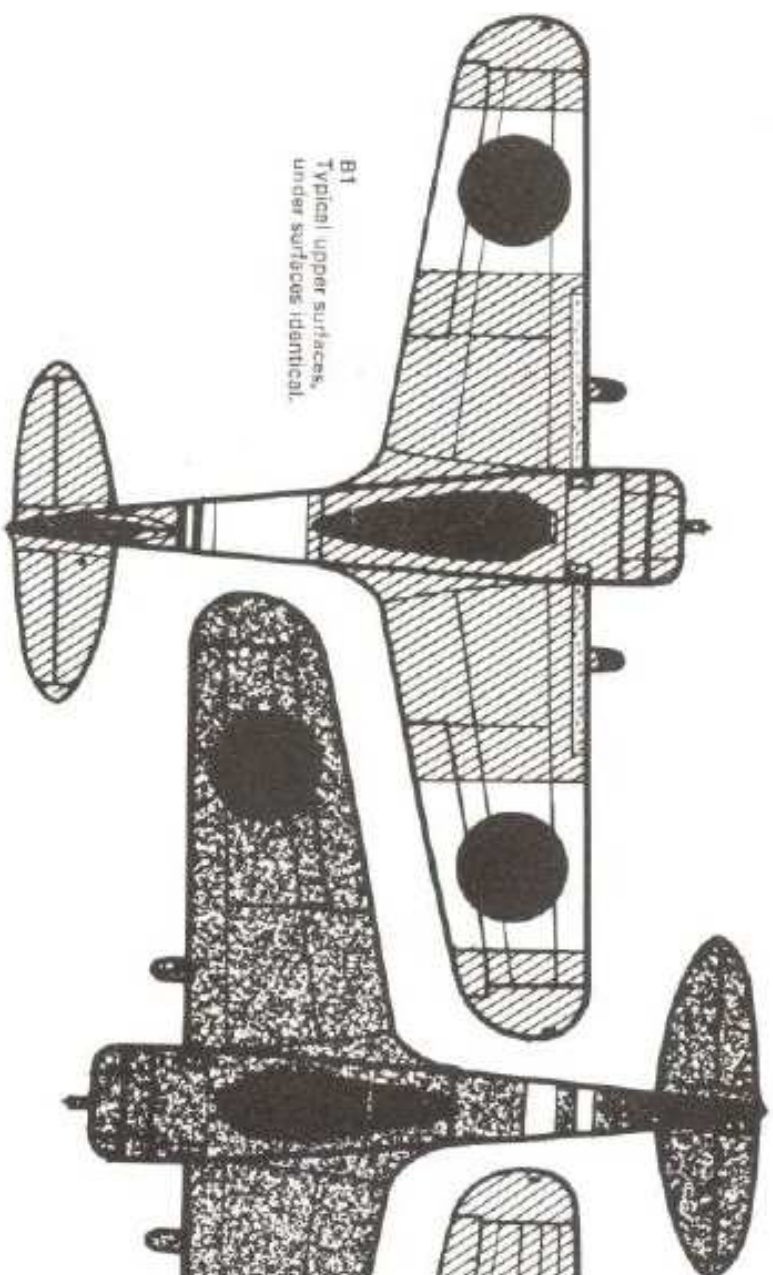
A2
Typical upper surfaces,
under surfaces identical.



A4
Typical upper surfaces,
under surfaces identical.

A3
Typical upper surfaces,
under surfaces identical.

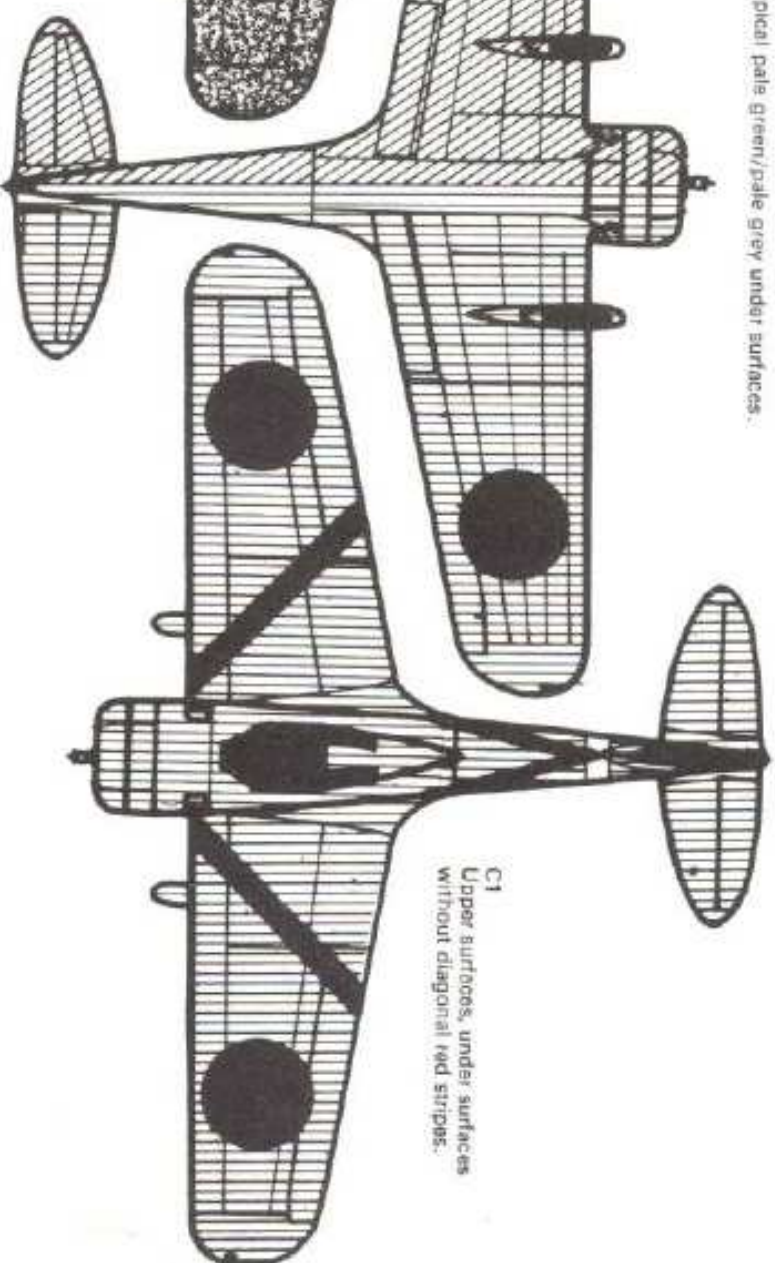
Red and blue shown as black.
See colour side-view illustrations
for correct colours.



B1
Typical upper surfaces,
under surfaces identical.

B2
Upper surfaces,
under surfaces pale grey.

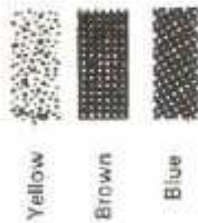
Typical pale green/pale grey under surfaces.



C1
Upper surfaces, under surfaces
without diagonal red stripes.



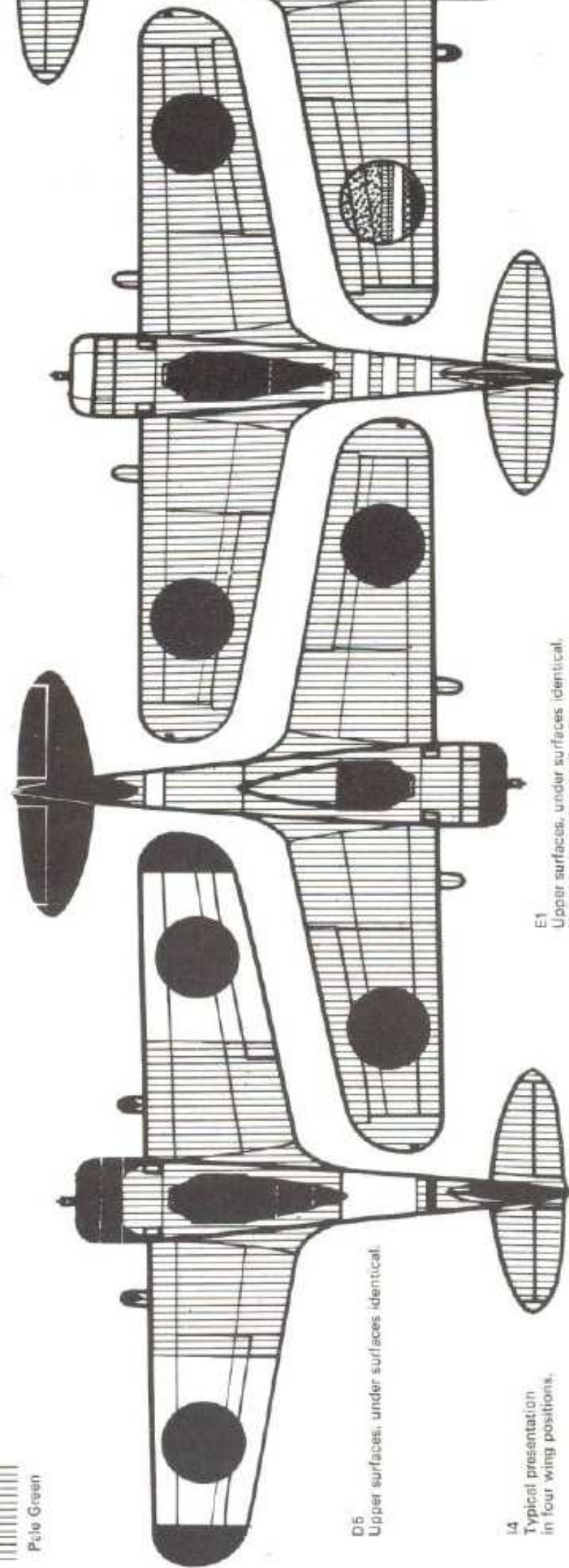
Pale Green



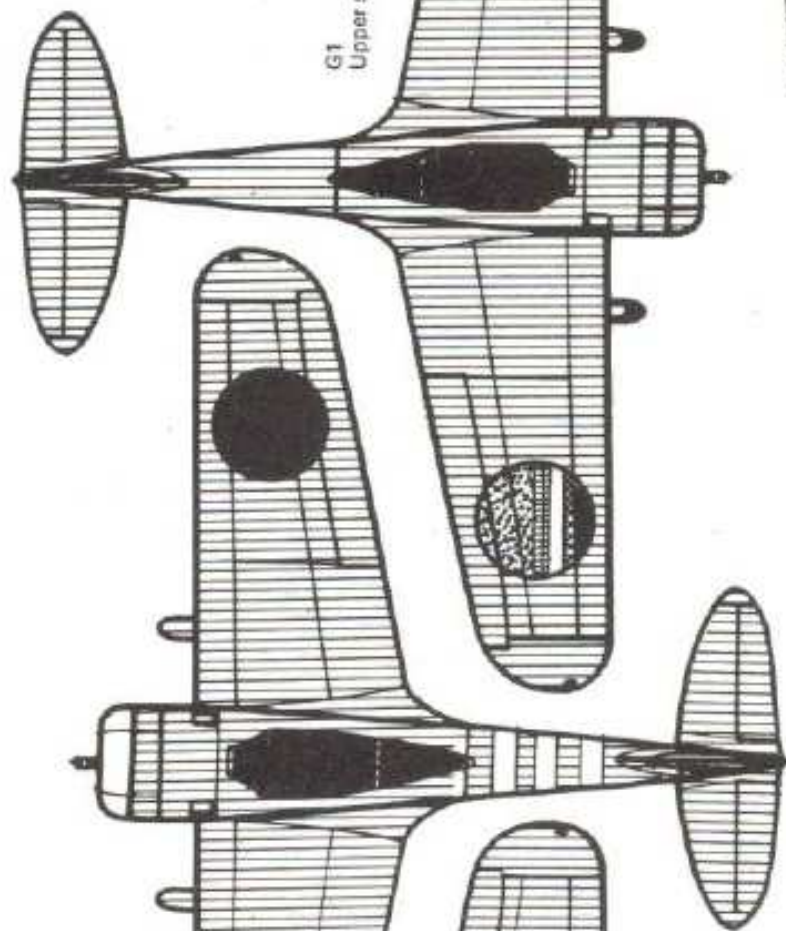
Yellow

Brown

Blue



D5 Upper surfaces, under surfaces identical.



G1 Upper surfaces, under surfaces identical.

14 Typical presentation in four wing positions.



E1 Upper surfaces, under surfaces identical. Note black cowl and tail unit.

F1 Upper surfaces, under surfaces identical.



15 Typical presentation in four wing positions.

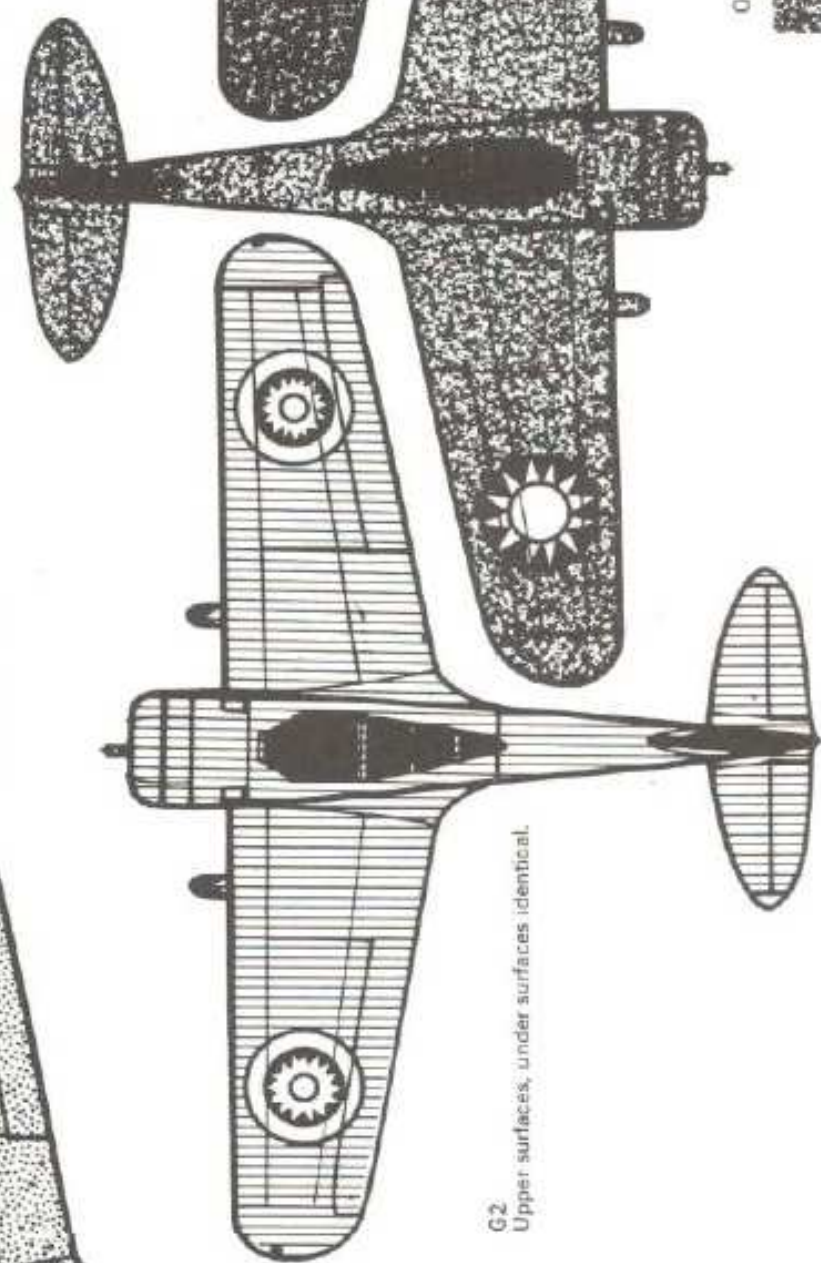
Red and blue shown as black, see colour side-view illustrations for correct colours.

G3 Upper surfaces, under surfaces pale gray.

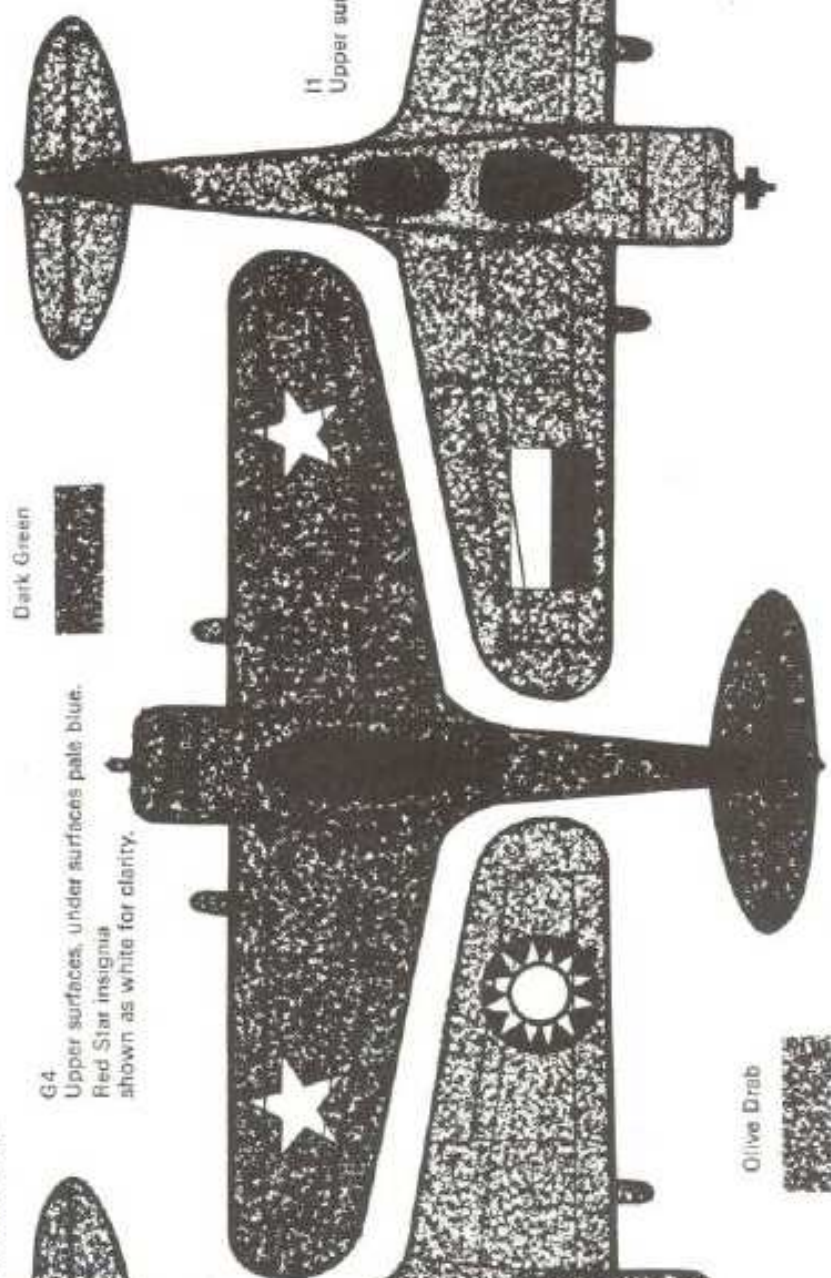


Dark Green

G4 Upper surfaces, under surfaces pale blue. Red Star insignia shown as white for clarity.



G2 Upper surfaces, under surfaces identical.



I1 Upper surfaces, under surfaces pale gray.

Olive Drab



JAPANESE ARMY AIR FORCES (JAAF) UNITS OPERATING KI.27 TYPE 97 FIGHTER 97 SEN

AIR BATTALIONS:

Battalion	When used	Area of Operations	Former A/C	Later A/C	Comments
2nd Fighter	July 1937– Aug. 1, 1938	Tachikawa, Japan, Shotoku, Manchoukuo	Ki.10	None	Air Battalion was organizational unit at beginning of Sino-Japanese "Incident." Unit formed at Tachikawa in 1937. Commander was Captain Tateo Kato. Reformed as 64th Air Combat Regiment at Shotoku, Manchoukuo on Aug. 1, 1938 with Ki.27 as original equipment.

AIR COMBAT REGIMENTS:

Regiment	When used	Area of Operations	Former A/C	Later A/C	Comments
1st Fighter	Nov. 5, 1938– early 1942	Manchoukuo • North China Nomonhan • French Indo-China Burma • Dutch East Indies	None	Ki.43 Ki.84	Unit formed at Kagamigahara, Gifu, Japan in August with Ki.27 as original equipment. Became operational on Nov. 5, 1938. Saw much combat.
2nd Reconnaissance	Aug. 31, 1938– early 1943	China	None	Ki.43 Ki.84	Unit formed as Army reconnaissance Co-op in August 1938 with Ki.27 as original equipment.
4th Fighter	Aug. 31, 1938– middle 1942	Formosa	Ki.10	Ki.45	Home Island defence unit formed at Ashiya, Fukoka, Japan with Ki.10 and Ki.27 as original equipment. Aug. 31, 1938.
5th Fighter	Aug. 31, 1938– middle 1942	Japan	Ki.10	Ki.45 Ki.100	Home Island defence unit formed at Tachikawa, Tokyo, Japan with Ki.10 and Ki.27 as original equipment. Aug. 31, 1938.
9th Fighter	July 1, 1938– middle 1942	China • Nomonhan Manchoukuo	Ki.10	Ki.44	One of the JAAF's "Old Units." Formerly the 3rd Fighter-Reconnaissance Air Regiment. Reformed at Kainei, China on July 1, 1938.
11th Fighter	Aug. 31, 1938– middle 1942	Manchoukuo • Nomonhan China • Malaya • French Indo-China • Dutch East Indies Burma	None	Ki.43 Ki.84	Unit formed at Harbin, Manchoukuo on Aug. 31, 1938 with Ki.27 as original equipment. Saw much combat at Nomonhan. Committed on first day of Pacific War.
13th Fighter-Attack	Aug. 30, 1938– April 1943	Japan	Ki.10	Ki.43 Ki.84 Ki.45	Home Island defence unit formed at Kakogawa, Hyogo, Japan on Aug. 30, 1938 with Ki.10 and Ki.27 as original equipment.
18th Fighter	Feb. 10, 1944– Sept. 1944	Japan	None	Ki.61 Ki.100	Hastily formed unit for Home Island defence utilizing existing aircraft. Formed at Kashiwa, Chiba with Ki.27 as training equipment. Combat aircraft was Ki.61.
21st Fighter	Oct. 15, 1942– middle 1943	French Indo-China • Dutch East Indies • Malaya Burma	None	Ki.43 Ki.84 Ki.45	Former 84th Independent Fighter Company and 82nd Independent Light Bomber Company reformed as fighter regiment at Hanoi, French Indo-China on Oct. 15, 1942 with Ki.27 and Ki.43 as original equipment.
24th Fighter	Sept. 1, 1938– middle 1942	Nomonhan • Manchoukuo Formosa • China Philippines • Dutch East Indies	None	Ki.43 Ki.84 Ki.45	Unit formed at Hairaru, Manchoukuo on Sept. 1, 1938 with Ki.27 as original equipment. In Philippines invasion Dec. 1941. Saw much combat.
33rd Fighter	Aug. 1, 1938– middle 1942	China • French Indo-China Dutch East Indies	Ki.10	Ki.43 Ki.61	Unit formed at Kyoju, China on Aug. 1, 1938 with Ki.10 and Ki.27 as original equipment. Saw much combat.
50th Fighter	Sept. 10, 1940– middle 1942	Formosa • China Philippines • French Indo- China • Thailand	None	Ki.43 Ki.84	Unit formed at Taichu, Formosa on Sept. 10, 1940 with Ki.27 as original equipment. In Philippines invasion Dec. 1941. French Indo-China and Thailand occupation force.
54th Fighter	July 26, 1941– late 1942	Japan (Hokkaido Defence) Eastern China • Kurile Islands	None	Ki.43	Home Island defence unit formed at Kashiwa, Chiba, Japan on July 26, 1941 with Ki.27 as original equipment.
59th Fighter	July 1, 1938– Fall 1941	Japan • Manchoukuo Nomonhan • French Indo- China • Malaya • Dutch East Indies	None	Ki.43 Ki.44 Ki.61 Ki.100	Home Island defence unit formed at Kagamigahara, Gifu, Japan on July 1, 1938 with Ki.27 as original equipment. First regiment to exclusively receive Ki.27. Fought at Nomonhan.
63rd Fighter	Feb. 25, 1943– middle 1943	Japan (Hokkaido Defence)	None	Ki.43	Unit formed at Hachinohe, Amori, Japan, on Feb. 25, 1943 with Ki.27 and Ki.43 as original equipment. Saw much combat.

Regiment	When used	Area of Operations	Former A/C	Later A/C	Comments
64th Fighter	Aug. 1, 1938– Summer 1942	Nomonhan • Manchoukuo China • Japan • French Indo-China • Malaya	Ki.10	Ki.43 P-40 Ki.44 Ki.84	Crack Sino-Japanese "Incident" unit. Regimental Commander Major Tateo Kato was a national hero. Unit formed out of former 2nd Fighter Battalion at Shotoku, Manchoukuo on Aug. 1, 1938 with Ki.27 as original equipment. Saw much combat.
68th Fighter	July 24, 1941– March 1943	Manchoukuo	None	Ki.43 Ki.61	Unit formed at Harbin, Manchoukuo on July 24, 1941 with Ki.27 as original equipment. Some Ki.43 aircraft added in 1942.
70th Fighter	July 30, 1941– July 30, 1944	Formosa • Okinawa Manchoukuo • Japan	None	Ki.44 Ki.84 Ki.45	Formed at Tokyo, Japan on July 30, 1941. Reformed in June 1943. Unit activated July 30, 1944 with Ki.44 for Home Island Defence.
77th Fighter	July 27, 1938– June 1943	Manchoukuo • French Indo- China • Thailand • Burma	Ki.10	Ki.43	Formed at Nanking, China on July 27, 1938 out of former 8th Fighter Battalion with Ki.27 as original equipment. Saw much combat.
78th Fighter	March 31, 1942– August 20, 1944	China • Manchoukuo New Guinea • Rabaul	None	Ki.61	Hastily formed defence unit assembled at Kyojo, China, March 31, 1942. Disbanded at Sarumi, SE Asia on Aug. 20, 1944.
85th Fighter	March 7, 1941– October 1942	China • Manchoukuo	None	Ki.44 Ki.84	Unit formed at Sonka, China on March 7, 1941 with Ki.27 as original equipment. Interception and defence Counter Soviet Patrol.
87th Fighter	March 1, 1941– July 1942	Manchoukuo	None	Ki.44	Unit formed at Harbin, Manchoukuo on March 1, 1941 with Ki.27 as original equipment.
144th Fighter	July 30, 1941– Nov. 1941	Japan	None	None	Home Island defence unit formed at Koyooka, Saitama, Japan with Ki.27 as original equipment. In Nov. 1941 reformed as the 244th Fighter Regiment.
204th Light Bomber	April 1942– Nov. 1943	Manchoukuo • Japan (Kyushu) Burma	None	Ki.43	Light Bomber Regiment formed in Manchoukuo flying Ki.27 fighters. Later became 204th Fighter Regiment.
206th Fighter	March 1, 1941– July 1941	Japan	None	None	Short-lived regiment formed in 1941 with Ki.27 as original equipment.
244th Fighter	Nov. 1941– late 1943	Japan	None	Ki.61 Ki.100	Former 144th Fighter Regiment reformed as the 244th at Chofu, Tokyo, Japan in Nov. 1941. Retained Ki.27 equipment for Home Island defence duties.
246th Fighter	June 30, 1942– June 1943	Japan • Formosa	None	Ki.44 Ki.84	Home Island defence unit formed at Kakogawa, Hyogo, Japan on June 30, 1942 with Ki.27 as original equipment.

INDEPENDENT COMPANIES:

Company	When used	Area of Operations	Former A/C	Later A/C	Comments
9th Fighter	1938– Feb. 1939	Manchoukuo • China	Ki.10	None	Unit formed July 1937. Later incorporated in 64th Regiment, Feb. 1939.
10th Fighter	July 1937– Oct. 20, 1942	Manchoukuo • China Philippines	Ki.10	Ki.43	Unit formed in Manchoukuo July 1937 with Ki.10 and Ki.27 as original equipment. In Philippines invasion Dec. 1941. Later joined 25th Regiment.
84th Fighter	July 1, 1939– Oct. 15, 1942	China • French Indo-China	None	None	Crack Sino-Japanese "Incident" unit known as the "Nagano Company." Formed out of 3rd Company of 64th Fighter Regiment in 1939.

COMBAT TRAINING REGIMENTS:

Company	When used	Area of Operations	Former A/C	Later A/C	Comments
115th Fighter	Aug. 31, 1942– March 31, 1944	Japan	Ki.46	Ki.79	Regimental training. Former 110th Training Regiment. Disbanded March 31, 1944 to form 17th, 18th and 19th Flight Training Companies.
116th Fighter	Aug. 31, 1942– March 31 1944	Japan	Unknown	Unknown	Former 102nd and 105th Training Regiments. Disbanded March 31, 1944 to form 16th Flight Training Company.
121st Fighter	1942– March 31, 1944	Japan	Unknown	Unknown	Disbanded March 31, 1944 to form Flight Training Companies.

FLIGHT TRAINING COMPANIES:

Company	When used	Location	Former A/C	Later A/C	Comments
17th	March 31, 1944— end of war	Japan	None	Ki.79	Used in Home Island Defence in addition to training. Flew both Ki.27 and Ki.79 trainers.
19th	March 31, 1944— end of war	Japan	None	Ki.79	As above.
27th	March 25, 1944— Dec. 1944	Japan	None	Ki.79	As above.
32nd	Feb. 25, 1944— Jan. 31, 1945	Japan	None	Ki.79	As above.
33rd	Feb. 15, 1944— Jan. 31, 1945		None	Ki.43 Ki.79	As above.

FLIGHT DRILLING COMPANIES:

Company	When used	Location	Former A/C	Later A/C	Comments
5th	July 1944— end of war	Japan	None	Ki.43	Unit activated in July 1944 when Drilling Companies were established. Formed May 31, 1944.

TRAINING SCHOOLS:

School	When used	Location	Former A/C	Later A/C	Comments
Akeno Army Flying School	1938–1943	Akeno · Hitachi	None	Ki.43 Ki.44	First flying school to initiate Ki.27 pilot training. Reformed in June 1944 to create both the Akeno Air Training Division and Hitachi Air Training Division.
Kumagaya Army Flying School	1942–1945	Kumagaya	None	Ki.43	Joined Akeno AFS for fighter training due to JAAF expansion. Flew Ki.27-Kai trainer conversions.
Tachiarai Army Flying School	Sept. 1940–1945	Tachiarai	None	None	Augmented JAAF fighter training following Nomonhan fighting. Flew Ki.27-Kai trainer conversions.
Army Air Academy	Dec. 1938–1942	Manchoukuo · Japan	None	Ki.55 Ki.79	Army Air Academy (also known as Military Flying Academy) flew Ki.27-Kai trainers at both Manchoukuo and Japanese schools.
Army Aviation Maintenance School	June 1938— June 1943	Tokorozawa	All current JAAF aircraft	All current JAAF aircraft	Supplied to Army Aviation Maintenance School for Ki.27 field maintenance and repair training.
Tokorozawa Army Aviation Maintenance School	June 1943–1944	Tokorozawa	All current JAAF aircraft	All current JAAF aircraft	Former Army Aviation Maintenance School reformed in June 1943.

FOREIGN SERVICE:

Country and Unit	When used	Area of Operations	Comments
Manchoukuoan Air Force (Manchoukuo)	Sept. 20, 1942— end of war	Manchoukuo	Manchoukuoan Air Force reformed on Sept. 20, 1942 with Ki.27 as original fighter equipment replacing Type 91 Fighter. Later used Ki.79 trainers.
Reformed Govt. of China (Nanking China)	Summer 1942	Occupied China	Scheduled Ki.27b fighters for occupied Nanking China Government. Never delivered due to distrust of Chinese forces and demand for aircraft for Japanese Home Island defence.
Republic of China Air Force (Nationalist China)	1938–1943	China	Captured examples test flown by Nationalists during the Sino-Japanese "incident" and the Pacific War.

NOTE: These lists are not to be regarded as complete as only those units for which Ki.27 use has been confirmed have been identified.

JAPANESE ARMY AIR FORCES (JAAF) UNITS OPERATING Ki.79 TYPE 2 ADVANCED TRAINER

FLIGHT TRAINING COMPANIES:

Company	When used	Area of Operations	Former A/C	Later A/C	Comments
17th	March 31, 1944— end of war	Japan	Ki.27	None	Doubled as Home Island Defence unit in addition to training. Flew both Ki.27-Kai and Ki.79 trainers.
19th	March 31, 1944— end of war	Japan	Ki.27	None	As above.

Regiment	When Used	Area of Operations	Former A/C	Later A/C	Comments
27th	March 25, 1944– Dec. 1944	Japan	Ki.27	None	As above.
31st	March 31, 1944– Jan. 30, 1945	Japan	Ki.27	None	Unit also flew Ki.36, Ki.54, Ki.55. Special Attack training.
32nd	Feb. 25, 1944– Jan. 31, 1945	Japan	Ki.27	None	As above.
33rd	Feb. 15, 1944– Jan. 31, 1945	Japan	Ki.27 Ki.43	None	As above.
36th	Feb. 29, 1944– Feb. 28, 1945	Japan	None	None	Unit also flew Ki.55 trainers. Special Attack training.
39th	July 31, 1944 end of war	Yokoshiba Airfield, Japan	Ki.43	Ki.61	Used in Home Island Defence. Flew Ki.79a model.
40th	July 31, 1944– end of war	Japan	None	None	As above.
43rd	June 7, 1944– Jan. 31, 1945	Japan	None	None	Unit also flew Ki.36, Ki.54, Ki.55. Special Attack training.

TRAINING SCHOOLS:

School	When used	Location	Former A/C	Later A/C	Comments
Army Air Academy	1942–end of war	Manchoukuo Japan	Ki.27 Ki.55	None	Both Military Flying Academy Flight Schools in Japan and Manchoukuo flew Ki.79 trainers.
Tokyo Army Boys Flying School	March 1943– Summer 1945	Tokyo, Japan	Ki.9 Ki.17 Ki.55	None	Pre-cadet training for students classified as potential future JAAF pilots. Formerly Tokyo Army Aviation School. Ultimate use was to train young <i>kamikaze</i> pilots.
Otsu Army Boys Flying School	March 1943– Summer 1945	Otsu, Japan	Ki.9 Ki.17 Ki.55	None	Pre-cadet training for potential JAAF pilots. Ultimately trained young <i>kamikaze</i> pilots.
Oita Army Boys Flying School	March 1943– Summer 1945	Oita, Japan	Ki.9 Ki.17 Ki.55	None	As above.
Utsunomiya Instructing Flight Division	June 1944– end of war	Utsunomiya	Ki.55	None	Advanced pilot training.
Sendai Army Flying School	March 1943– end of war	Mito	Ki.55	None	Formerly Mito Army Flying School from September 1940 through March 1943.
Tachiarai Army Flying School	Late 1942– end of war	Tachiarai	Ki.55	None	School founded in September 1940.
Tokorozawa Army Aviation Maintenance	June 1943– end of war	Tokorozawa	All current JAAF aircraft	All current JAAF aircraft	Formerly Army Aviation Maintenance School until June 1943 when similar schools were set up at Tachikawa and Gifu.

TAIATARI (Suicide) REGIMENTS:

Regiment	When used	Area of Operations	Former A/C	Later A/C	Comments
Unknown	Summer 1945	Japan (Hokkaido)	Unknown	Unknown	Used both Ki.79a and Ki.79b models in <i>kamikaze</i> attacks.

FOREIGN SERVICE:

Country and Unit	When used	Area of Operations	Comments
Indonesian People's Security Force	Sept. 1945– 1949	Dutch East Indies Indonesia	Former JAAF Ki.79b trainers left in the Indies. First aircraft flown by Indonesian nationalist guerillas.
Red Army Air Force (Communist China)	Oct. 1945– July 1948	Manchuria North China	Former JAAF Ki.79a and Ki.79b trainers obtained from Japanese stocks in occupied Manchoukuo (i.e. Manchuria) and North China by the Chinese Red Army. Used as standard Red Army Air Force trainers until Chinese Communist military forces were reformed in July 1946.
People's Liberation Army Air Force (Communist China)	July 1946–1952	North China Manchuria Central China	When PLAAF was formed in July 1946 the Ki.79 aircraft remained standard trainers until the Korean War period. Used at Air Academy at Sian. Replaced by Russian trainers in 1952.

NOTE: These lists are not to be regarded as complete as only those units for which Ki.79 use has been confirmed have been identified.

SPECIFICATIONS: Nakajima Ki.27 Type 97 Fighter and Manshu Ki.79 Type 2 Advance Trainer.

NOTE: All dimensions in original Japanese metric. Dimensions and climb in meters (m), weights in kilograms (kg), distances in kilometers (km) and speeds in kilometers - per-hour (km/hr.) Data in parenthesis are estimates or approximate.

Model and Specs	Type PE Prototype	Ki.27 Prototypes	Ki.27-Kai Prototypes	Ki.27b-Kai Prototypes	Ki.27b-Kai Prototypes	Ki.27-Kai Prototypes	Ki.79 Prototypes	Ki.79a	Ki.79b	Ki.79c	Ki.79d
Span (M)	10.4	10.40	11.31	11.31	11.31	11.31	11.31	11.500	11.500	11.500	11.500
Length (M)			7.53	7.53	7.53	7.53	7.53	7.850	7.850	7.850	7.850
Height (M)			3.25	3.25	3.25	3.25	3.25	3.000	3.000	3.000	3.000
Wing Area (M ²)	16.4	16.4*	18.56	18.56	18.56	18.56	18.56	18.56	18.56	18.56	18.56
Weight Empty (kg)		1,360	1,110	(1,000)	(1,000)	(1,000)					
Weight Loaded (kg)		1,510	1,780								
Max. Speed (km/hr)			460/5,000m					340	(280)		
Cruising Speed (km/hr)			5,000/5' 22"					5,000/10' 24"			
Climb (m/min.)		2x 7.7	2x 7.7	2x 7.7	2x 7.7	2x 7.7	1x 7.7	1x 7.7	2x 7.7	2x 7.7	2x 7.7
Armament—M.G. (mm)		—	—	—	—	—	—	—	—	—	—
Armament—Cannon (mm)		—	—	—	—	—	—	—	—	—	—
Armament—Bombs (kg)		—	—	—	—	—	—	—	—	—	—
Power Unit—Mfr.		—	—	—	—	—	—	—	—	—	—
Type	Nakajima Ha.1a	Nakajima Ha.1a	Nakajima Ha.1b	Nakajima Ha.1b	Nakajima Ha.1b	Nakajima Ha.1b	Nakajima Ha.13a	Hitachi Ha.13a	Hitachi Ha.13a	Hitachi Ha.13a	Hitachi Ha.13a
H.P.	680	680	710	710	710	710	710	510	510	510	510
Crew	1	1	1	1	1	1	1	1	1	1	1
Aircraft—Mfr.	Nakajima	Nakajima	Nakajima	Nakajima	Nakajima	Nakajima	Nakajima	Manshu	Manshu	Manshu	Manshu
First Built	July 1936	Oct. 1938	June 1937	Dec. 1937	1940	July 1940	1942	1942	1942	1943	1944
Number Built	1	2	10	(565)	(150)**	2†	(3)	1328†††	1328†††	(200)	(200)

*Prototype Ki.2701 had 16.4m² area. Ki.2702 had 17.6 **Trainer versions converted from existing production. ***Tachikawa built 50. Total Nakajima production for Ki.27a and Ki.27b was 2019, including prototypes. †Included in Ki.27b totals. Conversion of existing airframes to retractable gear. ††Two-seat trainer modification of existing Ki.27b airframes. †††Total Ki.79 production, all models.

Front Cover, top to bottom:

Nakajima Ki.27b, 50th Air Combat Regiment, 3rd Company, Burma and Thailand, Spring 1942.
 Nakajima Ki.27b, Manchoukuo Air Force, August 1942. Presented to Air Force on its first 'Aviation Day', September 20th 1942. Purchased with funds obtained through public subscription for Manchoukuo Air Force aircraft. Notation 'Defence of Homeland' appeared on all aircraft, followed by identification of contributor.
 Nakajima Ki.27b, 11th Air Combat Regiment, 1st Company, Malaya, February 1942.

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